DOCUMENT RESUME

ED 346 254 CE 061 256

TITLE The Columbia-Willamette Skill Builders Consortium. Final Performance Report.
INSTITUTION Portland Community Coll., Oreg.
SPONS AGENCY Office of Vocational and Adult Education (ED), Washington, DC. National Workplace Literacy Program.
PUB DATE Apr 92
CONTRACT V198A00158-90
NOTE 142p.; For the 8 documents that make up Appendix V, see CE 061 257-264.
PUB TYPE Reports - Descriptive (141) -- Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01/PC06 Plus Postage.
DESCRIPTORS Adult Basic Education; Adult Literacy; Community Colleges; Computer Literacy; *Consortia; Cooperative Programs; *Curriculum Development; Demonstration Programs; *Educational Cooperation; Inplant Programs; *Literacy Education; Program Development; *Program Effectiveness; Program Evaluation; Program Implementation; School Business Relationship; Two Year Colleges; Unions
IDENTIFIERS Oregon; *Workplace Literacy

ABSTRACT

The Columbia-Willamette Skill Builders Consortium was formed in early 1988 in response to a growing awareness of the need for improved workplace literacy training and coordinated service delivery in Northwest Oregon. In June 1990, the consortium received a National Workplace Literacy Program grant to develop and demonstrate such training. The consortium's eight workplace literacy training delivery partnerships were formed by three local community colleges working with eight businesses and industry associations, six labor organizations, a state-level office of community college services, and a private nonprofit educational research and consulting firm. The consortium developed customized curriculum materials and offered training in basic math, basic writing, computer basics, and individual skills enhancement. (Appendixes include: (1) guidelines for providing effective workplace literacy training using a consortium model; (2) community college coordinators' reports; (3) newsletters; and (4) a third-party evaluation report which discusses the design, a modified version of the Context-Input-Process-Product model, participants, instruments, and procedure, which included interviews and observations. Three conclusions are presented: strong evidence of learner increases in specific job-related skills, moderate evidence of improved employee performance and productivity, and little evidence of follow-up. Data collection instruments are provided.) (YLB)

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THE COLUMBIA-WILLAMETTE SKILL BUILDERS CONSORTIUM

National Workplace Literacy Program (84.198)
U.S. Department of Education

FINAL PERFORMANCE REPORT

Submitted by
Portland Community College*
12000 S.W. 49th Av.
Portland, Oregon 97219

In behalf of
Anodizing, Inc.
Associated General Contractors of America, Inc.,
Oregon-Columbia Chapter
Clackamas Community College
International Brotherhood of Teamsters, Chauffeurs, Warehousemen & Helpers of America,
Union Local No. 162 and Union Local No. 206
Joint Council of Teamsters No. 37
Leupold & Stevens, Inc.
LWO Corporation
Mt. Hood Community College
Nabisco, Inc.
Northwest Oregon Labor Council, AFL-CIO
Northwest Regional Educational Laboratory
Oregon Cutting Systems
Oregon Office of Community College Services
Oregon Trucking Associations, Inc.
Oregon-Washington Carpenters/Employers Apprenticeship and Training Trust
United Brotherhood of Carpenters & Joiners of America,
Local Union No. 247
Warn Industries, Inc.

April 1992

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The Columbia-Willamette Skill Builders Consortium

National Workplace Literacy Program (84.198)

Final Performance Report
April 1992

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I. Guidelines for Providing Effective Workplace Literacy Training Using a Consortium Model

II. Coordinators' Reports

Clackamas Community College - Helen Humphreys
Mt. Hood Community College - Wayne Werbel
Portland Community College - Nikki Sullivan

III. *Skill Builders* Newsletters

IV. Final Evaluation Report - Jorie W. Philippi, Performance Plus Learning Consultants, Inc.

V. Instructors' Reports and Sample Curriculum Materials **

A. Clackamas Community College:
Oregon Cutting Systems - Scott Copeland
Basic Math
Computer Basics
Warn Industries, Inc. - Scott Copeland
Shop Math
Computer Basics

** See related documents for these materials.

B. Mt. Hood Community College:
   Anodizing, Inc. - Marjorie Taylor, Sandra Clawson,
   and Scott Copeland
   Basic Measurement Math
   Carpenter Apprentice Program - Marjorie Taylor,
   Sandra Clawson, and Scott Copeland
   Shop Math
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C. Portland Community College:
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   Math
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The Columbia-Willamette Skill Builders Consortium

National Workplace Literacy Program (84.198)

Final Performance Report
April 1992

1. Project Accomplishments

The Columbia-Willamette Skill Builders Consortium was formed in early 1988 in response to a growing awareness of the need for improved workplace literacy training and coordinated service delivery in Northwest Oregon. In June of 1990 the Consortium received an 18-month grant from the National Workplace Literacy Program to develop and demonstrate such training.

The Consortium's eight workplace literacy training delivery partnerships were formed by three local community colleges working with eight businesses and industry associations, six labor organizations, a state-level office of community college services, and a private nonprofit educational research and consulting firm.

The Consortium's application for funding included the following objectives:

- Build workplace literacy partnerships among business, educators, labor, government, and community groups
- Create training that links basic skills instruction directly to the literacy requirements of actual jobs targeted for specialized Adult Basic Education (ABE) training programs
- Address the increasing basic skill requirements of the changing workplace
- Target workers with inadequate skills for continued employment, increased productivity or career advancement
- Increase productivity by improving literacy skills
- Reduce barriers to participation in literacy training by offering support services appropriate to the needs of learners
- Establish individualized, personally meaningful educational plans for participating learners whenever appropriate to encourage their continued learning
- Provide rigorous learner assessment and careful evaluation of the service delivery and Consortium Partnership model
- Demonstrate a replicable model for the establishment of workplace literacy consortia that effectively share resources and expertise in the development and provision of training and in the dissemination of assessment tools and curricula

In this performance report we shall describe the actual accomplishments of the Consortium partners as they relate to these original objectives.

Build workplace literacy partnerships. The development of these partnerships had begun prior to the receipt of the federal grant. After two adjustments in partnerships (due to lag time between grant application and receipt of the award and changes in company priorities and production schedules), the following organizations participated in developing and delivering customized basic skills training:

Anodizing, Inc.
Associated General Contractors of America, Inc., Oregon-Columbia Chapter
Clackamas Community College
International Brotherhood of Teamsters, Chauffeurs, Warehousemen & Helpers of America, Union Locals No. 162 and NO. 206
Joint Council of Teamsters No. 37
Leupold & Stevens, Inc.
LWO Corporation
Mt. Hood Community College
Nabisco, Inc.
Northwest Oregon Labor Council, AFL-CIO
Northwest Regional Educational Laboratory
Oregon Cutting Systems
Oregon Office of Community College Services
Oregon Trucking Associations, Inc.
Oregon-Washington Carpenters/Employers Apprenticeship and Training Trust
United Brotherhood of Carpenters & Joiners of America, Local Union No. 247
Warn Industries, Inc.

As this list indicates, the Consortium pulled together a mix of Northwest businesses and industries, labor organizations, trade associations, and educational service and technical assistance providers. Upon receipt of the grant, the Consortium held a reception to initiate the process of collaboration and networking among partners. As the Skill Builders project progressed, communication within the consortium became focused on the design and delivery of services. The education partners -- Clackamas Community College, Mt. Hood Community College, Portland Community College and the Northwest Regional Educational Laboratory (NWREL) -- communicated regularly with each other via phone, FAX, and monthly meetings. The community college staff in turn communicated directly with their respective business/labor partners (see the following chart, "Summary of Partnerships and Classes Provided"). As will be described further below, the Consortium also produced a series of bimonthly newsletters which provided the larger workplace training community (the mailing list numbered over 1,000) with information about the activities of the Consortium as well as a focus for discussion of key issues in the rapidly developing field of basic skills training for the workplace.

Create customized basic skills instruction. Consortium staff received training in the design of basic skills instruction which is based on specific work-related contexts. This included training regarding the functional context approach and literacy task analysis techniques from Jorie Philippi, of Performance Plus Learning Consultants, Inc., the project's outside evaluator. The project's various community college staff

Columbia-Willamette Skill Builders Consortium
Summary of Partnerships and Classes Provided

Partnerships and Classes	Teacher	Dates	Hours	Students
Clackamas Community College: Oregon Cutting Systems: Basic Math	Romano/ Copeland	2/91--5/91	M W 1 1/2 hrs. ea. & 2x/day Then became a study group	N=4
Basic Writing	McKillop	Spring '91	T 1 1/2 hrs.	N=5
Computer Basics	Copeland	Summer '91 Fall '91	3 consecutive Saturdays; offered 3x/day, 3 hrs. ea. Eve. class offered 3x	N=27 20 completed 9 hrs. course N=27 9 hrs. course
Targeted Learning Center	Humphreys	1991	Drop In	N=14
Warn Industries: Shop Math	Copeland	1/91--5/91 6/91--8/91	T Th 2 hrs. ea. T Th 1 hr. ea.	N=79 registered; post for 3 classes= 18, 28, 27 N=26 completed 20 hrs. of instruction
Computer Basics	Copeland	3/91--5/91 Summer '91 Fall '91	1 hr. 2x/week	N=35 (16 hrs. average) N=134 total registered
Targeted Learning Center	Humphreys	1991	Drop In	N=5

Partnerships and Classes	Teacher	Dates	Hours	Students
Mt. Hood Community College:				
Carpenter Apprenticeship Shop Math	Clawson Taylor Copeland	10/10/90 -- 02/28/92	14 hrs/week	N=307 reg. (Average 1-6 hrs/ student)
Commercial Drivers License Test Preparation	Clawson Taylor Copeland	10/23/90 -- 02/28/92	14 hrs/week	N=92 reg. Range 1-40 hrs/ student (average of 11 hrs to pass exam)
Anodizing, Inc.: Basic Measurement Math	Copeland Taylor Clawson	6/91--8/91 1/3-2/28/92	1 hr/week for 10 weeks Offered for two shifts	N=34 reg. N=38 reg.
Portland Community College: Leupold & Stevens: English in the Workplace	Burwell & Clarke Esler	10/17/90 2/91--5/91 5/91--6/91 6/91--8/91	2 1/2 hrs/week x 8 weeks 8 weeks 8 weeks 8 weeks	N=13 N=9 (same for two courses) N=8 N=10
Math	Taylor	2/12/91-- 04/04/91 04/14/91-- 06/06/91 1/92--2/92	TTh, 2 1/2 hrs ea. 6 weeks	N=15 reg. N=20 reg. (10 attended regularly) N=9
LWO Corporation: English in the Workplace --Beginner	Campbell	Fall '90 Winter '91 Spring '91	TTh 1 1/2 hrs ea.	N=24 reg.

Partnerships and Classes	Teacher	Dates	Hours	Students
English in the Workplace --Intermediate	Schneider	11/27/90 01/08/91	TTh 1 1/2 hrs ea. Added swing shift	N=13 reg. Attendance dwindling
	Huntley	2/1--5/6/91		N=10 Attendance low
Nabisco: Math	Smith	10/31/90-- 09/30/91	12 hour class offered 3-4 times	N=42 s
Individualized Skills Enhancement	Smith	10/31/90-- 09/30/91	W-Th Available 7:30-3:30	N=13 Hours ranged from 9-72 hrs. (3 for 8 mos (2-3 hrs/week

then entered the worksites of their respective partners to conduct needs assessments and become familiar with the nature of the jobs targeted through that process and the literacy skills required to do them. This was the basis for curriculum development.

The Consortium developed customized curriculum materials and offered training in the following areas: basic math and measurement (shop math), basic writing, computer basics, commercial drivers license test preparation, English in the workplace, and individual skills enhancement. The chart, "Summary of Partnerships and Classes Provided," lists the classes designed and offered at each of the eight Consortium worksites. Sample curriculum materials can be found in Appendix V.

Although we had received training about the extent of effort needed to develop customized workplace curricula, we were not prepared for the amount of time required to (1) consolidate relationships with partner businesses and negotiate course content and logistics of instruction delivery, and (2) develop the appropriate curricula. Consortium coordinators at each of the three community colleges established these partnerships; however, much of the continuing negotiation fell to the instructors because of their involvement in the worksites as they explored the context for training, identified workers' and employers' needs and expectations, and designed the curricula.

In this area of customized curriculum design and instruction delivery, the Consortium suffered from lack of access to a stable cadre of full-time instructors. This is a problem common to programs based at community colleges with hiring policies which limit the number of full-time faculty positions possible. The Consortium trained a number of highly skilled part-time instructors who developed customized curricula, taught within the Consortium programs for awhile, and then found more stable, better paying jobs as trainers in local industries or state agencies. To a certain extent this can be viewed as a measure of the success of the Consortium's staff selection and training. However, the Consortium's inability to compete with industries and other agencies to keep its instructional staff caused interruptions in services and the subsequent use of staff without the initial specialized training.

Address increasing basic skill requirements of the changing workplace. Several of our business, industry and labor partners were chosen precisely because they were experiencing major changes in the ways work is organized and production completed. For example, Nabisco, Inc., is converting its operations from a heavy machine, labor-intensive process to a high-tech, streamlined production using sophisticated computerized equipment. Employees who once were responsible for a single task must now be familiar with all aspects of the baking process, for example, as well as understand the computers being used there, troubleshoot problems, convert fractions to decimals and use calculators, read technical instructions (often written by college educated engineers), and communicate with other workers throughout the plant.

Warn Industries, Inc., a manufacturer of 4-wheel drive hubs, winches, and light truck accessories, is also undertaking major changes in the way it does business. To continue to compete in the international market, Warn is streamlining its manufacturing process while improving quality and involving its employees. Conversion from specialized departments into product focus teams responsible for all stages of production and shipping is placing far greater demands on employees to use problem-solving, collaboration, and communication skills. Warn is also

instituting a new compensation system called Pay for Knowledge. This encourages employees to expand their skills and become more flexible team players as well as experience more control over their work and salaries.

The Consortium's partnership with the Teamsters provides another example of the implications of changing work requirements for workers' basic skills. By April 1992, truck drivers across the nation must pass the new commercial drivers license exam mandated by the federal government. Although most agree that this tougher test will improve highway safety, it has caused many drivers to recognize their lack of basic skills, including study skills and test-taking strategies.

In each of these partnerships, the Consortium's training has addressed the increasing skill requirements brought about by changes in the work environment. (For greater detail on these partnerships, see the attached copies of *Skill Builders*, the Consortium's newsletter.)

Target workers with inadequate skills for continued employment, increased productivity or career advancement. All of the eight partnerships targeted workers with these types of skill deficits. In addition to those mentioned above, the shop math training provided for the Oregon/Washington Carpenters/Employers Apprenticeship and Training Trust prepared incoming apprentices to be able to remain in the program and pass the required courses. At Leupold & Stevens and at LWO Corporation, workers could do their current jobs without improved English language and literacy skills, but would not be able to move up in the company or communicate well with fellow employees. Managers wanted to offer employees the opportunity to improve their skills so that they could be more flexible to take on other jobs as demands within the workplace change. Employers and workers at Anodizing and Oregon Cutting Systems (OCS) were concerned about increasing productivity (and reducing waste), as well as career advancement. In each of these settings, Consortium staff identified skills needed within those contexts and provided the appropriate training. Training in computer basics is an example of workers' interest in entry-level knowledge of the use of computers as preparation for potential changes in job requirements and job upgrades.

Increase productivity. Despite being the "bottom line" for most businesses, as noted above this was not always the goal of the training requested and designed by the Consortium partners. It is possible that merely offering training may result in improved worker morale, which can influence productivity. However, it is usually very difficult to identify direct cause and effect relationships between basic skills training and productivity. This is especially true when classes are of limited duration (only an hour or two per week for 4-6 weeks, for example). Also, the Consortium experienced difficulty establishing comparable and consistent data collection across the eight programs and three community colleges. Evaluation questionnaires differed from program to program and were not consistently filled out.

Nevertheless, in cases where the question was considered appropriate, supervisors rated the effects of the training on aspects of participants' job performance (such as productivity, quality, quantity of work, attendance, attitude, cooperation, problem-solving, application of skills to job, ability to handle new procedures). The results were generally positive. Supervisors viewed the classes as having a useful impact on the participants. When asked directly about productivity, they noted slight improvements. Supervisor rating forms can be found in Appendix V, Instructors' Reports.

Reduce barriers to participation. In planning its services the Consortium partners recognized the importance of offering support services as needed by learners to facilitate their participation in the training. These barriers included lack of childcare and transportation, among others. Perhaps because the classes were offered at each worksite and workers' schedules were considered in planning the classes, these kinds of barriers were seldom voiced. Consequently, the Consortium did not provide childcare or transportation or other support services. The availability of childcare was publicized as a recruitment strategy in some programs, but no one requested such support.

Establish individualized education plans (IEPs). An overarching goal of Consortium efforts has been to help workers become lifelong learners who will continue to upgrade their skills and maintain their competitive, productive capacity as their job skills requirements change. One step toward achieving this is accomplished by giving them positive educational experiences through Consortium classes at the worksite or in individualized tutoring offsite. Another step is to give them information and encouragement about further training and educational opportunities available either through their employer or at local community colleges. Whenever time permitted, instructors encouraged individuals to define and pursue their goals. In the small number of cases where instruction was offered one-on-one (through the Targeted Learning Center at Clackamas Community College and through the learning lab set up at Nabisco), IEPs were developed together with the learner.

Provide learner assessment and evaluation of service delivery and Consortium model. The Consortium's original proposal included an extensive plan for assessing learners' acquisition of new skills and knowledge and their subsequent application on the job, as well as a careful evaluation of the provision of services and the overall Consortium model. Unfortunately, in the final negotiations for funding, the funding agency chose to drastically reduce the assessment and evaluation component of the project. Consequently, learner assessment was limited to instructor-developed, class-specific assessments and outcome data were not consistently collected. Pre- and post-test scores were compiled and are reported below in Section 3. The final report from the project's outside evaluator can be found in Appendix IV.

Demonstrate a replicable model for workplace literacy consortia. The model for the Columbia-Willamette Skill Builders Consortium included (1) training delivery partnerships between education partners and business, industry and labor organizations; (2) technical assistance and evaluation provided by national experts in the field of workplace literacy training; and (3) an advisory council comprised of business, labor, government, community and educational agencies. The model encouraged collaboration among partners to make the best use of resources and specialized expertise in the design, development and delivery of customized workplace basic skills training and to avoid duplication of effort by colleges working with business or labor partners with similar needs.

For the most part, the Consortium was successful in demonstrating this model. The education partners worked well together. Despite the serious staffing problems caused by community college part-time staff requirements (noted above), the Consortium's developing collaboration among the three community colleges enabled the Skill Builders' various workplace programs to benefit from the services of several very skilled and dedicated part-time instructors. By sharing instructors

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across the colleges, the Consortium was able to minimize the negative impact of the part-time restrictions of the individual colleges.

Another benefit of Consortium member collaboration was the ability to share resources for curriculum development. As the samples of curriculum materials in Appendix V illustrate, these instructors have become real experts in understanding specific work skills requirements and customizing basic skills training to fit the needs of individual workers and employers.

The Consortium also enabled the community college members to develop expertise in certain areas and avoid duplication of effort. Collaboration through the Consortium allowed them to share resources, experiences and ideas about issues arising in the development and delivery of this type of training (issues regarding recruitment, assessment, curricula, and evaluation) and about successful strategies and materials. The Coordinators' and Instructors' Reports (Appendices II and V) go far beyond this brief overview to document the project's development and activities. They are a rich resource of valuable insights about the process of designing workplace literacy programs and implementing a consortium model of service delivery.

The original proposal included a collaborative management design in which each education partner had a coordinator who participated in the management of the Consortium and the funded project. The project was to be convened by the project director, whose main role was designing and conducting the evaluation. With the federally required reduction in the evaluation component and the assignment by the funding agency of larger project management responsibilities to NWREL, the management of Consortium activities had to be renegotiated. The Consortium undertook this federally-funded project without having clearly redefined the roles and responsibilities of its education partner key staff at the Consortium management level. Despite goodwill and dedication to project goals on the part of all staff involved, this lack of clarity resurfaced during the course of Consortium activities.

Ambiguity also existed regarding the degree of institutional commitment of the education partners. The community colleges themselves made little effort to institutionalize this consortium model of service delivery. In two of the three colleges, the institutions were undecided regarding appropriate placement of workplace literacy services within the colleges' departmental structure and this seems to have affected their willingness to extend Consortium efforts. The success of this project is due largely to the high level of personal commitment of the individual college staff (the Coordinators) involved in forming the Consortium, obtaining the federal grant, and carrying out the project.

Looking back, Consortium partners agree that project results from this model could have been more successful if more time had been given to training coordinators and instructors and providing more technical assistance, particularly in the development and use of appropriate and consistent assessment and evaluation tools. The dedicated part-time instructors shouldered much of the responsibility for developing measures and compiling assessment and outcome data. However, coordination across three community colleges with different data tracking systems and eight individualized workplace training programs was difficult at best.

The third component of the model -- the advisory council -- was not implemented in this project for reasons that are explained below.

2. Alterations in Schedule of Accomplishments

The original Month-by-Month Plan of Operation (Table 6 in the proposal) was modified during negotiations for funding. As noted above, at that time the project's extensive evaluation plan was replaced by more intensive and centralized management, a limited outside evaluation, and the elimination of standardized testing and test development activities. As agreed in the grant negotiations, the Consortium did not conduct the following, originally proposed activities:

Month 2:	Conduct BASIS for norming purposes with sample of workers in targeted job classifications
Month 3:	Evaluation Team finalizes plans for conducting BASIS pre-test when instruction begins
Month 4:	Conduct BASIS with participating learners
Months 5-15:	Evaluation Team develops learner job performance evaluation methods (including collection and use of business/labor partners' existing productivity and performance assessment tools)
Month 15:	Conduct BASIS post-test Evaluation Team gathers learner productivity/job performance data
Month 16:	Evaluation Team analyzes learner outcomes data: job-specific program assessments; individual educational plans; BASIS pre- and post-test results; changes in productivity/job performance
Month 18:	Submit Project Final Report to Department of Education, to include: Guidelines for Evaluating Job-Specific Workplace Literacy Programs

As noted above, the Consortium experienced delays in consolidating some of its business/labor partnerships once the project was funded. In some cases, partnerships changed due to changes within companies during the time elapsed from submission of the proposal to receipt of funding. In other cases, identification and development of services to be delivered simply took far longer than we anticipated. Negotiations with company staff and labor representatives was often complex. Consortium instructors spent long hours on site learning about the larger context for the training as well as the skills required and/or desired for certain jobs. Curriculum development often took far more time than instructors were accustomed to giving. The Plan of Operation called for instruction to begin in Month 4. Start-up of instruction was delayed at least one month in all of the eight partnerships. In some instruction began as late as Month 9; two companies withdrew completely from the Consortium due to internal changes in priorities and two new companies had to be identified and their needs explored. (See the preceding chart, "Summary of Partnerships and Classes Provided," for dates instruction was offered at each of the worksites.)

Two activities which were not conducted by the Consortium were the formation of the Columbia-Willamette Workplace Literacy Advisory Council and the

development of a plan for a region-wide Workplace Literacy Campaign (Months 1, 6, 12, 18). Early in the project, nominations for membership on the Council were requested and some names were suggested. However, the need to dissolve some partnerships and form new ones and the intensity of efforts to develop targeted services in all partnerships delayed the formation of the Council so significantly that it was eventually abandoned. In retrospect, this was not a wise decision. A broadly representative, functioning Advisory Council could have been useful in helping Consortium partners clarify roles and responsibilities and lobby for needed institutional support. It also could have helped to increase the Consortium's visibility in the community and could have focused needed energy on seeking additional sources of funding to continue Consortium activities beyond the federal grant.

3. Project Participants - Characteristics and Outcomes

By the end of the 21 months of project activity (including a 90-day no-cost extension), the Consortium had provided workplace basic skills training to a total of 987 workers, more than three times our original estimated goal. The project gathered data on the following demographic characteristics of participants: age, ethnicity, gender, education level, some information on employment status. When appropriate, pre- and post-test scores were also compiled. The Instructors' Reports (in Appendix V) present details on learner characteristics and outcomes by partnership and class. Summaries of participant characteristics and averages for pre-/post-test scores (when available) for the various partnerships follow:

Clackamas Community College in partnership with:

Oregon Cutting Systems.

Computer Basics:

- Of 52 learners, 40% were men, 60% women
- 4% were African American, 90% Caucasian, 6% Hispanic
- 6% completed 11th grade, 44% completed 12th grade, 10% had a GED, 15% had some college classes, 25% had more than 1 year of college (10% AA degree, 8% BS/BA degree)
- Age range was 19 - over 65

Targeted Learning Center:

- Of 15 learners, 20% were men, 80% women
- 7% were African American, 7% Asian, 80% Caucasian, 7% Hispanic

- Of 12 reporting, 17% completed 10th grade, 50% completed 12th grade, 8% had a GED, 25% had some college

- Age range was 19 - 65

Warn Industries.

Shop Math:
- Of 79 learners, 58% were men, 42% women

- 3% were African American, 1% American Indian, 90% Caucasian, 4% Hispanic, 3% other

- Of 65 reporting, 11% completed less than 12th grade, 83% completed 12th grade, 6% had a GED

- Age range was 19 - over 65

- Average increase in pre-/post-test scores was 18% for class of 29 learners

Computer Basics:
- Of 134 learners, 66% were men, 34% women

- Of 133 reporting, 1% were African American, 3% Asian, 93% Caucasian, 3% Hispanic

- Of 134 learners, 7% completed less than 12th grade, 56% completed 12th grade, 6% had a GED, 8% had some college, 23% had more than 1 year of college (7% AA degree, 4% BS/BA degree)

- Age range was 19 - over 65

- Average increase in pre-/post-test scores was 4% for class of 41 learners

Targeted Learning Center:
- Of 5 learners, 40% were men, 60% women

- 20% were Asian, 80% Caucasian

- 40% completed less than 12th grade, 20% completed 12th grade, 40% had a GED

Mt. Hood Community College in partnership with:

Carpenter Apprenticeship.

Shop Math:
- Of 307 learners served, 95% were men, 5% women

- Of 270 reporting, 3% were African American, 4% American Indian, 91% Caucasian, 2% Spanish Surnamed

- Of 234 reporting, 10% had less than high school, 16% had a GED, 71% had a high school diploma, 1% had 2 years of college, 2% had 3 years of college, and 1% had a certificate

- Age range was 18 - 49

- Average increase in pre-/post-test scores was 134%

Commercial Drivers License.

Test Preparation:

- Of 92 learners, 90% were men, 10% women

- Of 86 reporting, 1% were American Indian, 98% Caucasian, 1% Spanish Surnamed

- Of 64 reporting, 30% had less than high school, 10% had a GED, 55% had a high school diploma, and 7 % had 2 years of college

- Age range was 19 - 61

- Average increase in pre-/post-test scores was 35%

Anodizing, Inc.

Basic Measurement Math:

- Of 72 learners, 92% were men, 8% women

- Of 24 reporting, 8% were African American, 4% Asian, 88% Caucasian

- Of 56 reporting, 14% had less than high school, 29% had a GED, 38% had a high school diploma, 14% had 2 years of college, 4% had 3 years of college, 2% had Bachelor's

- Age range was 20 - 51

- Average increase in pre-/post-test scores was 95% for Summer 1991; 10% for Winter 1992

Portland Community College in partnership with:

Leupold & Stevens.

English in the Workplace:
Fall 1990 --

- Average increase in pre-/post-test scores was 11% (8 learners)

Spring and Summer 1991 --

- Of 10 learners, 50% were men, 50% women
- 40% were Asian, 40% Hispanic, 20% other
- 40% completed less than 12th grade, 40% had a high school diploma, 20% had BA degree

Math:
Winter 1991 --

- Of 15 learners, 27% were men, 73% women
- 7% were African American, 7% American Indian, 87% Caucasian, 7% Hispanic
- Of 14 reporting, 14% had a GED, 64% had a high school diploma, 21% had some college
- Age range was 30 - 60

Winter 1992 --

- Of 9 learners, 22% were men, 78% women
- Of 6 reporting, 17% were African American, 17% American Indian, 50% Caucasian, 17% Hispanic
- Age range was 23 - 59

Average increase in pre-/post-test scores was: 9% (Unit 1), -25% (Unit 2), 16% (Unit 3), 31% (Unit 4)

LWO Corporation.

English in the Workplace:
Beginner, Fall and Winter 1990-91 --

- Of 21 learners, 100% were men
- 14% were Asian, 86% Hispanic
- Age range was 20 - 51
- Of 17 reporting, 35% made no change in performance level, 47% went up one level, 6% went up two levels

Intermediate, Fall and Winter 1990-91 --

- Of 13 learners, 100% were men
- Of 12 reporting, 33% were Asian, 67% Hispanic
- Of 8 reporting, 75% completed less than 12th grade, 25% had some college, 100% had some previous adult education
- Age range was 19 - 39
- 54% made no change in performance level, 46% went up one level

Nabisco.

Math and Individualized Skills Enhancement:

- Of 42 learners, 71% were men, 29% women
- Of 41 reporting, 83% were Caucasian, 12% African American, 5% Hispanic
- Of 42 reporting, 43% had less than high school, 48% had a high school diploma, 4% had some college
- Age range was 26 - 65
- Average increase in pre-/post-test scores in math was 25%

The Instructors' Reports (Appendix V) include numerous learner evaluations in which participants commented about their experiences and the outcomes of the training for them. A few examples:

"Course was well taught -- took a lot of the mystery out of computer language and did encourage me to proceed in training."

"I got my GED!"

(Learner recommends the carpentry math class because it) "could help them solve problems for themself instead of relying on an engineer."

"This program gave me confidence from the start with much help and preparation...I went on to pass the rest of the other six tests...Without this program and the sincere help and instruction...I wouldn't have known where to begin."

4. Dissemination Activities

Consortium partners conducted a variety of activities to disseminate information about the Consortium's work and about workplace literacy training issues in general:

- During the first quarter of the project, a "kickoff" event was held at a local hotel to present the project to the local business and labor community and to initiate the process of networking among Consortium participants. Over 60 individuals attended.

- Consortium partners gave a 2-hour presentation about workplace literacy, the Consortium and individual partnership activities at the Work Now and in the Future 7 Conference held November 7-8, 1990, in Portland, Oregon. Over 1000 educators attended the conference. The Consortium session was well attended and the project's work well received.

- During the third quarter, several project staff participated in Washington State's statewide workplace literacy conference, Building the Foundation. They gave a panel presentation on the Consortium model for delivery of workplace literacy services in contexts where company employees normally are served by multiple providers.

- Consortium staff presented two sessions at the Work Now and in the Future 8 Conference in Portland November 18-19, 1991, one on individual company-based programs, the other on developing workplace literacy consortia.

- Staff attended the AAACE in 1991 and made a presentation about workplace literacy consortium service delivery.

- Project staff designed activities for a national telecommunications network among workplace literacy grantees. The base system for the network is OTAN (Outreach Technical Assistance Network), a part of the Connect, Inc., Information Services.

- The project produced a bimonthly newsletter, *Skill Builders*, which debuted in January 1991. The newsletter was mailed to over 1100 business, labor, industry, education, and community-based agencies in the greater Portland metropolitan area. The newsletter presented workplace basic skills training issues and national developments while highlighting Consortium partnership training programs and instructors in each issue. *Skill Builders* enjoyed an enthusiastic audience locally and became known nationally, receiving high praise from the editor of the Business Council on Effective Literacy (BCEL).

5. Evaluation Activities

The Consortium's Final Evaluation Report, by Jorie Philippi, of Performance Plus Learning Consultants, Inc., is attached to this report as Appendix IV. The fact that this project included eight different training programs being provided by three different community colleges made the evaluator's task very complex. Operating with limited resources, she has done an excellent job of pulling together a wide

range of data from a variety of sources. Two minor points made in the Final Evaluation Report need to be clarified, however: (1) At no time did the project director prohibit Consortium staff from communicating directly with the evaluator. Rather, after some confusion about timelines and channels of communication, the director and the evaluator agreed that coordination of data was needed and communication would be smoother if materials and reports were gathered by the director and forwarded to the evaluator rather than having individuals send them directly to her. (2) The evaluator distributed evaluation forms as possible forms for gathering data within individual partnerships, noting that they might be adapted as necessary for each site. Some instructors designed their own forms.

6. Changes in Key Personnel

Other than the changes in part-time instructors mentioned earlier, there were no changes in key personnel during the course of this project.

APPENDIX I

Guidelines for Providing Effective Workplace Literacy Training Using a Consortium Model

Appendix I.

Guidelines for Providing Effective Workplace Literacy Training Using a Consortium Model

Beyond the success of the workers served, the success of the Columbia-Willamette Skill Builders Consortium can be found in the lessons Consortium members learned about providing productive training programs and, more important, about creating and maintaining an effective consortium model for delivering workplace literacy training.

Briefly, we have learned that workplace literacy training partnerships are more successful when they:

- Include workers from the start in the identification and clear definition of training needs and in the design, delivery and evaluation of the training itself. (This assumes the inclusion of union management and membership in worksites with unions.)
- Have clearly defined needs for training -- avoiding the ambiguous "I'm sure we must have a workplace literacy problem." Effective programs strive for agreement/common understanding of needs by management and workers.
- Identify opportunities for direct application of new skills, making sure that skills taught are clearly applicable to current or future jobs.
- Compensate employees for their time spent in training.
- Value workplace literacy training enough to pay for at least part of it.
- Respect and protect workers' rights (especially confidentiality).
- Provide training programs at locations and times convenient for participants and offer support services as needed (child care, transportation, counseling, etc.).
- Are careful in selecting program and course names, avoiding the "L" word or words associated with remediation or basic schooling.

In addition to ensuring that their training programs incorporate the above characteristics, effective workplace literacy consortia:

- Ensure that the education partners (training providers) share common goals and understandings regarding workplace literacy training and the role of the consortium. In particular, effective consortia recognize lifelong learning as a goal of successful companies and workers and work with them to foster this perspective.
- Identify areas of specialization among the education partners to reduce duplication of services.

- Create consortium positions for specialists (e.g., a curriculum developer) whose expertise can be shared by all consortium partners.
- Dedicate sufficient resources to curriculum development.
- Provide specialized staff training in the provision and evaluation of workplace literacy programs and ongoing technical assistance and support for staff.
- Maintain a common (shared) cadre of trained, experienced workplace literacy instructors, finding ways to overcome individual institutional constraints to provide adequate time/pay to retain them.
- Provide regular opportunities for staff discussion of consortium/program issues.
- Conduct shared networking and dissemination efforts to enhance the visibility and capabilities of the consortium.

APPENDIX II

Coordinators' Reports

Coordinator Narrative

Helen Humphreys

Clackamas Community College

I PROGRAM IDENITY WITHIN OUR INSTITUTION.

The history of the institution's interest in a workplace literacy grant rests with Dian Connett. She wrote one unsuccessful Clackamas grant application in 1988 and then helped write the successful consortium WPL grant of 1990.

She interested three faculty members in working on the project though eventually one person finished it. The reasons for two of the faculty dropping the project are probably typical for people who already have full time assignments: intensified workloads, inadequate coverage for the primary assignment, and disinterest. Disinterest was caused from the revelation that most of the project was going to include many meetings at inconvenient times and that workplace literacy as a field for private consultation, post grant was also going to include much meeting and politicing.

The unattractive nature of WPL as a source of private consultation is an interesting and significant theme that re-occurs throughout the project. One frustrating aspect of collaborating with some businesses is the unpredictably large amounts of time it takes for the coordinator/consultant to set up projects down through the management hierarchy. Another frustration is,in some cases, the unwillingness of management, in some cases, to find a willing participant on their side to work on the project, or if they do find one, to grant him/her time and power to expedite the project. Much time for startup negotiations must be scheduled for, budgeted for, and expected.

Clackamas's section of the Columbia/Willamete Skillbuilders Consortium became the responsibility of faculty member assigned to an off campus adult basic skills lab--Targeted Learning Center. The faculty member, Helen Humphreys, worked for a Alternative Programs and reported to the Dean of Student Services, Dian Connett.

II PROGRAM FIT AND COLLABORATION WITH THE COLLEGE.

Initially the assignment of the workplace literacy project to a faculty member at Targeted Learning Center seemed appropriate, but soon conflicts with other departments bubbled up. TIC had seemed a good fit because the learning lab was

already recruiting students from among employed adults in the same geographical area the grant proposed to cover. Another advantage of using TLC as an anchor for the WPL project was so we could use some of the same part-time staff and educational materials and resources for both projects.

The department whose toes we stepped on was the customized contracts department (EMD). They reportedly felt we were providing free services, through the grant, that they were ready and willing to charge companies for. They were also concerned that we might disrupt relationships they had already established within the companies.

The relationship between EMD and the WPL project eventually evolved into a mutually agreeable compromise. Our Dean has agreed that once the WPL project is finished, EMD will take over the customizing of basic skills for workplaces. We have worked out a code of ethics that include the agreement that assessment information on individuals will not be shared with management. In other words, neither the workplace literacy project or EMD will assist businesses in screening out-firing- employees on the basis of any generic tests we might give for the purposes of placement in a educational program.

III STAFFING ISSUES.

I have hired about a half dozen people for short term and long term WPL projects. One, the first, quit suddenly after she used up about $1,500 worth of resources, mostly in going to the many startup meetings. The second, Scott Copeland, did 90% of the curriculum development and teaching at our two successful projects. He did a immense job in an outstanding manner. The other teachers did short term projects such as substituting, keyboard instruction,and a short English and writing series.

The ratio of development pay to instruction pay we paid to the grant instructors is generous compared to the configuration for a part-time instructor on campus. However, the project demanded much flexing as far as class times and as far as customizing the curriculum went. I paid instructors 2 hours of development time for every hour of instruction until the courses were developed and revised, and then paid straight instructional pay. I budgeted for whatever time was necessary at the end for evaluation and data collection.

When I compare the most successful and least successful hires, here is what I find:

<u>Similar</u>

* both hated committee meetings
* both were smart
* both were independent

* both developed friendships with in the businesses

* both searched for resources

* both were looking for new careers

* both were praised by student/employees

* both were interested in private consulting

Different

* he had experience teaching adults and she didn't

* this was his second WPL project and her first

* he did his own audit and she used mine

* he worked out his own hours with the companies and she expected me to do it

* he wanted to do the data collection and she didn't

* he took over the reins from me and she didn't

My conclusion about why one person was more successful as far as follow-through and performance, was that he felt immediate ownership based on past experience both with this kind of project and this kind of student. She didn't know where she was going so she was reluctant to take over, yet she chafed under my direction.

While both hated the interminable meetings, he expected it and accepted it while she was disappointed and became disenchanted with this aspect of WPL.

IV LOGISTICAL CONCERNS

Our WPL project had the ideal logistical setup. Both of our projects were within a mile of Targeted Learning Center, where I was located. This proximity enabled me to spend a minimum amount of time on the road. The proximity to TLC also made it easy to draw students from our projects to the privacy of our learning lab. We found that beginning readers were more willing learn at the lab than on site. Moreover, the instructors could easily use the computers or borrow materials and A.V. equipment from TLC. Furthermore, because the projects were less than two miles from each other, the instructors didn't have to waste time traveling from project site to project site.

Both of our business partners provided adequate classroom spaces, storage and support services.

Our main instructor, Scott Copeland, was able change his schedule to meet the needs of the clients. I'm well aware that not every instructor could do this. He taught in the evening as well as before 7am and on Saturdays.

V COORDINATION AND COLLABORATION AMONG CONSORTIUM MEMBERS

ROLES. Working out the role of Northwest Regional Education Laboratory within the consortium membership was the most problematic role problem we had. Was the lab directing the overall project or facilitating it? The unfolding of the lab's role was worked out at our monthly meetings. Initially a representative from each project reported on the progress of the project. Then the group closely questioned the representative. This process did not feel productive --people felt put on the spot and second guessed. We had a painful discussion about whether this was helpful or not. We decided to change the format to something that would assist the instructors. We switched to an inservice training format which worked well. From that point on the NWREL representatives acted as facilitators which seemed like a better fit. The Lab did a great job writing the grant and distributing and excellent newsletter. They hosted a getting-to-know-you buffet for all the partners and in general kept the lines of communication open.

SHARING RESOURCES. My best instructor was also hired by the other consortium members for both the WPL project and other projects. I was pleased that he was getting enough hours to afford to continue being part time. On the other hand that also meant his time on my projects was limited, especially the data compilation and curriculum development segment(paid at half the instructional rate) which was put on hold.

Sharing curriculum with Consortium members was always valuable as was problem solving about students. If we do this type of project again,I think this is

where we need to spend our shared time. Most especially we all need to have more curriculum resources for the kinesthetic learner which I see as being the dominant learning style in production work.

EVALUATION. The whole domain of evaluation has always been problematic for the consortium members. First of all, the funds for the evaluation section of our grant were reduced. We were torn between wanting to do an extensive evaluation of a new field of study and not being funded to do so. Secondly, we needed to create evaluation tools because WPL is a new enough field that commercial evaluation tools weren't adequate. And third,our business partners were disappointed that we weren't able to have technical help with evaluation .Evaluation would be where they could convince managers and shareholders of the need for and value of workplace literacy instruction. We decided to do what we had time and money for, of course.

VI ADVANTAGES OF THE CONSORTIUM MODEL TO BUSINESSES.

There are potential advantages for both community colleges and businesses with a consortium type of organization to deliver basic skills instruction to employees. If the consortium could act as a clearing house, it could screen clients to the colleges based on specialized instruction or proximity. The Consotium

clearinghouse could market for all the colleges. It could establish a standard cost which might be underwritten by the Department of Economic Development. The colleges could share start up costs, staff, inservice costs and a standard code of ethics. The businesses would have one convenient agency to deal with for the subject of WPL.

VII DISADVANTAGES OF THE CONSORTIUM MODEL.

Although the consortium model has been positive for the most part, this structure has disadvantages. The life of the consortium depends on the fate of each individual college and even more, each individual department within the individual college. Departmental reorganization at one college threatened our whole consortium organization at one point. Some territorial problems still exist among colleges. The consortium's own coordination and communication issues take much of the individual coordinator's time. Some mechanical issues such as dispersement of funds from one college to another are cumbersome.

VIII CRITICAL AREAS FOR IMPROVEMENT.

PARTNERS. We should pick our business partners very carefully. In many

ways those partners to whom we have to give a hard sell about the benefits of collaboration, are not ready to deal with workplace literacy. We should look around longer to find the company who has started to deal with literacy issues on their own: they are going to be more willing and more committed to workplace literacy for their own reasons. I would look for small companies who are interested in Demming's theories of management or in pay-for-knowledge systems as those who might easily fold workplace literacy into existing training structures instead of considering it an add-on.

COMMUNICATION. We must keep the communication lines open at every level both within the business and within the college's part of the project. Business partners should know what is necessary from them in the way of time and resources. We need to set up mileposts at which time we agree to discuss the critical issues as well as house keeping. One critical issue that should be discussed at each milepost is evaluation; how do we know we are making an impact. Since evaluation issues will be different for every company, I think developing custom qualitative and quantitative evaluation tools, testing them and revising them would be the major collaborative effort other than recruitment of students and customizing basic skills curriculum.

CLARIFY AND ORGANIZE THE PROJECT. The college partners need to clarify some in-house issues such as budget guidelines or mileposts, an agreement with the evaluators about what exactly is due when and what the closing procedures

are. Other housekeeping issues that would have been helpful to have clearly stated were what the grant requirements were for demographics which we could add onto for the sake of customizing. I wish we had asked for a home phone and workplace mailing address for each employeeon our Demographics sheets.

CLOSING THE PROJECT. We should have left enough time to ruminate over the evaluation with the business partners. Also we should have planned a panel or party for all the partners so that we would have a sense of closure at the end of the project.

Coordinator's Report

Columbia-Willamette Skill Builders Consortium

Prepared by

Wayne Werbel
Mt. Hood Community College

COORDINATOR SUMMARY REPORT

I. PROGRAM IDENTITY WITHIN INSTITUTION

Skill Builders at Mt. Hood Community College is housed in The Center for Community and Economic Development. The Center serves as the focus for most of the college's external programs, (Community Education, Contracted Training for Business and Industry). However, Adult Basic and Developmental Education, as well as, social service type programs (Welfare Reform, Dislocated Worker) provided the administrative and instructional staff for Skill Builders. This configuration created a strong institutional identity. Furthermore, hiring the Secretary of the College Business Officer and engaging the Associate Dean of Mathematics as a Skill Builder instructor enabled increased credibility. Skill Builders was featured in College Advancement publications and was profiled to the College Board as part of the May meeting concerning literacy.

II. PROGRAM FIT AND INTERDEPARTMENTAL RELATIONS

The college has offered basic skills instruction to business and industry (Language, Math, Reading, etc.) via its Developmental Education, ESL, and Contracted Training departments. The traditional disciplines (Mathematics, English, Voc Ed) did not offer training outside the campus and its satellite locations. The Skill Builders established two off campus learning centers (Carpenters and Teamsters) thereby not impacting on limited college space. The college no longer offered apprenticeship training and there was no overlap in vocational offerings.

The Skill Builders received indirect staff support from the Director of Adult Basic Education whose involvement assured acquisition of quality staff, as well as the institution of management/coordination structures that supported quality instruction. The Director of the Center, known for innovativeness and entrepreneurial energy, promoted the program and emphasized assertaining "FTE" statistics to demonstrate the value of the effort to the institution.

III. STAFFING ISSUES

There are difficulties working with an instructional staff that is limited by the college's part-time teacher ceiling of 12 hours per week. A program of part-time staff is inherently difficult to coordinate. Fortunately, the staff is excellent. They have remained unchanged since the beginning of the program having performed initial assessment, developed instructional materials, and delivered training. The staff were cross-trained in each field (carpentry, truck driving and manufacturing) to enable greater flexibility and group perspectives in problem solving.

IV. LOGISTICAL CONCERNS

In consideration of the limited amount of staff time and large scope of work, making time to meet often conflicted with times that instruction occurred. The part-time staff truly maximized hours; when instruction required only one person, other staff developed curriculum for ongoing projects.

V. COORDINATION AND CONSORTIUM

The consortium enabled three community colleges to work together to advance Workplace Literacy. The initial coordination meetings with instructors illustrated the breadth of our common efforts. Fifteen people working with many companies sharing similar start-up problems. The cooperation enabled us to share staff resources between colleges. The consortium formally offered training on many occasions via Jorie Philippi and others. The Northwest Regional Educational Labora tory operation role was unclear. While it was designated as Project Manager, the "real" management was within the colleges. The lab played an excellent conven ing and dissemination role.

VI. ADVANTAGES OF CONSORTIUM MODEL

The primary advantage for our model was that we could address a SMSA without being confined to geographical limitations placed by college boundary area. Employers and workers need not be limited by college district. Secondly, each school specialized in an area - labor-based project, manufacturing, small business. The consortium enabled teachers to work multiple programs thereby enabling earnings beyond the 12 hour limitation and still staying part of the same system.

VII. DISADVANTAGES OF THE NEW CONSORTIUM MODEL

The leadership in the Skill Builders came at the program or intra-college level. While the consortium maintained an umbrella for the receipt of grant funds, a majority of the activity was generated by instructors and the business and labor partners. The roles of director and grant administrator, as specified in the proposal, were unclear during the operation of the program. Resources were primarily devoted to delivery of services. The consortium, while good in concept, required ongoing development and maintenance of effort. While the consortium operated prior to the DOE grant, once funded, the consortium became consumed by the grant. Very little thought and effort was put into diversifying funding or planning the consortiums future. The barriers to working together still existed; district bound aries, marginal buy-in by the colleges (no college funding), supporting a consortium model. Each individual institution operated differently thereby limiting the develop ment of a unified or integrated system after grant funding. The consortium did for a time allow for closer cooperation than is usually typical in joint efforts. This is, how ever, more reflective of the individuals involved from the respective institutions than the institutions or the consortium.

VIII. CRITICAL AREA FOR IMPROVEMENT

The initial proposal projected timelines to initiate services to business. The upfront development, task analysis, and curriculum development required a greater amount of time than was initially planned. The measures of success or desired outcomes as initially discussed in the proposal were different in the final analysis. Often the needs of learners and constraints of the workplace directed instruction, as it should be.

In selecting partners, greater consideration should be given to the size of the company or organization. While we received support from top management, the active involvement from line and middle managers was required to implement services. Therefore, while larger enterprises on the surface appear to be ideal candidates for workplace literacy programs, small and midsize organizations seem more manageable for the delivery of instruction.

The area of instructor compensation is extremely critical. Firstly, this college has a self-imposed limit of 12 hours per week for part-time instructors. Secondly, the college pays $18 per instructional hour. The other colleges pay more and one consortium partner has no ceiling on instructor hours. More importantly, good instructors are easily absorbed by industry or by full-time facuty positions when available. Lastly, part-time instructors receive few benefits. Therefore, developing a solid instructional staff required more resources and greater institutional flexibility.

With the end of the grant in sight, the consortium and workplace literacy programs at the colleges are unlikely to continue in their present form. Currently, marketing and technical assistance is targeted at businesses who communicate need for basic skill instruction in the workplace. The college workplace literacy coordinators are responsible for such efforts. Referrals come from Northwest Regional Educational Laboratory as a result of inquiries from the Skill Builder newletter. Other contacts come from college staff in developmental education and contracted training for business and industry. Once the federal funding is gone, the Northwest Regional Educational Laboratory will no longer produce the newsletter and their clearinghouse role will become limited. Furthermore, the college will no longer have a designated workplace literacy coordinator to respond to service requests for program and instructional development.

Our request for Department of Education Workplace Literacy grant additional fund ing met a sad ending with elimination based on an unsigned partnership agreement from an entity described in the proposal as an affiliate in the abstract but a partner in the text. Sadly, the developmental efforts of many schools, businesses and unions in the Portland Metro area greatly suffered by the elimination, not to mention that wind was taken out of the consortium's sails. The college did submit a proposal to the US Department of Education Commercial Drivers Education Program which will allow continuation of the partnership activities with Teamsters. In the final analysis, federal resources enabled the community colleges in the Portland Metropolitan area to experiment and develop capacity to offer functional context basic skills instruction to business and lobor.

SKILLBUILDERS GRANT

Coordinator's Report

Prepared by

Nikki Sullivan
Portland Community College

October 23, 1991

SKILLBUILDERS GRANT

A Report to Steve Reder

By Nikki Sullivan

PROGRAM IDENTITY WITHIN INSTITUTION

Workplace Literacy Programs (WLP) began in October, 1988 when the ABE/GED/ESL Department established a GED program at Portland Meadows Race Track. As more companies began to inquire about services, an internal curriculum project was approved to design a process for establishing WLP for the department. This was followed by a joint 353 grant in which Clackamas Community College and PCC worked together to design a system for establishing WLP throughout the entire state system. In October of 1989, an eight hour per week release-time was granted to an ABE/GED instructor to continue to develop PCC WLP.

PROGRAM FIT AND COLLABORATION WITH OTHER PROGRAMS

Initially WLP were developed and delivered from the ABE/GE/ESL department. In October 1989, the ABE/GED instructor moved to the Institute for Employee Development, the department at PCC responsible for separate contracts. IED had the expertise in marketing and contracting; ABE/GED/ESL had the expertise in content and instructors. It was felt this would be the most successful way to deliver WLP. The Skillbuilders Grant also led the way in building up interaction between the three major metropolitan community colleges. It was hoped that eventually the consortium would be responsible for the delivery of all WLP within the metropolitan area.

STAFFING ISSUES

The major issue with staff concerns the difficulties that arise from the need to use part-time instructors. Our college has a union contract which limits instructors to twelve hour weeks with no benefits. This caused instability and lack of continuity as many instructors left to take on full-time work elsewhere.

Three of the instructors trained by Jori Philippi in task analysis left the project taking with them that knowledge. They also took with them the company "relationship" that had been built up over several months of work. Consequently both programs suffered as new instructors had less training and less opportunity to create new relationships.

As coordinator, my time was severely limited. During the summer I was able to devote many hours to the grant, but when school started I was limited to eight hours per week. These hours were also spent working with several other WLP that had been developed. Since my time was limited to 1-3pm Monday through Thursday, It was very difficult to make arrangements to visit companies, hire, train and supervise instructors.

Much of the work done by instructors required them to work on their own time. As dedicated teachers they absorbed a great deal of the work. Because of the limited time of both the instructors and the project coordinator a great deal of the "relationship" work was carried on by the instructor since they were housed at the company sites.

Companies also faced personnel losses and changes as their employees left for other jobs or new employment. This constant change is both company and college personnel created some real problems throughout the life of this project.

It seems ironic to try to educate workers in the basic skills they need by using a work force made up of part-time workers who have less security and benefits than the workers they are teaching.

LOGISTICAL CONCERNS

It was almost impossible to be able to meet with company representatives, support instructors, and provide resources and materials and help in curriculum design on only eight hours per week. Physically it was difficult to travel to the company sites and it was very difficult to schedule meetings in which all the necessary parties could be present. In addition to serving as project coordinator, I was also working on a state grant for the plastics industry and had several other companies. Since I had to teach my morning classes it was not possible to juggle my schedule to make company appointments etc. Much of the work with instructors took place at night and over week-ends or at marathon sessions in one day.

TIME LINES

Because the grant was so late in being awarded, our whole time line at our companies was thrown off. By the time we were able to start many of our companies were in peak production times or laying workers off. It was really difficult to get things in "sync" and I'm not sure we ever did. Because we were so late and because it took us more time to write the customized curriculum it seemed like we were never really "on-time."

COMPANY REPRESENTATIVES

I developed all the initial contacts with the three PCC partners and attended several meetings in which initial plans were discussed. I met with workers, supervisors and management to discuss company needs. I also took tours of the facilities and talked at length about company needs and the areas most likely to be served under the grant. Then by the time the grant was awarded, I was working again and had to hire the

instructors for this project. Fortunately all of them had prior experience in WLP. So I accompanied all of the instructors, introduced them to the company representatives and helped them get established. From that time on much of the continued work with the company representatives was done by the instructors. In all three of our companies the initial contact person changed. Much of the development, knowledge, and history was lost as the company assigned someone else to work with us. This created continuity problems as the programs progressed.

COMPANY VRS GRANT EXPECTATIONS

The grant we applied for and the one we finally received were quite different. After lengthy phone negotiations some things were redefined and some were totally eliminated. In addition, the time lines were all changed by the time we got the grant. So this had a major impact on what we were able to do. It wasn't clear until our August meeting with our outside evaluator how strongly our grant was tied to task analysis a process that was somewhat new to us and turned out to be very difficult to use at our ESL companies.

Many of the ESL workers felt offended by this approach. They took a great deal of pride in their work and felt this class was not appropriate. They really wanted to study English for use outside of their work.

Many of our union workers were also unclear as to how a WLP would help them get promotions--something that they felt was clearly defined by seniority and union contracts.

All of our companies at least initially did not see the value of paid and/or release time for this training so consequently many workers choose not to attend on their own time.

COORDINATION AND COLLABORATION AMONG CONSORTIUM MEMBERS

There is something to be said for networking and support. I think the monthly meetings were invaluable; it was important to share concerns, frustrations, and successes. As we proceeded through the grant we continued to do staff development for instructors as well as the coordinators. After several meetings the coordinators and director began to meet separately to discuss issues, such as budgets training etc. I wish we had held more meetings and had received more training.

I think it would have been very helpful if we had received a clear cut job description and better guidelines for developing our programs. This is especially true concerning the absolute requirements of the grant as well as the needs of the outside evaluator.

ADVANTAGES OF THE CONSORTIUM

1. Identifying and training qualified instructors and curriculum developers we could all share.
2. Identifying special issues that we were interested in to avoid duplication of efforts.
3. Designing curriculums that could be shared.
4. Responding to various needs of our companies in a collaborative manner (by sharing information and knowledge about what was working).
5. Sharing resources on major issues such as recruitment, assessment, curriculum and evaluation.

DISADVANTAGES OF CONSORTIUM

1. Limitations imposed by institutional requirements (part-time help, no general fund monies, territory issues).
2. Lack of time and training for instructors and coordinators.
3. Lack of clarification and definition of all roles and positions.
4. Lack of clear guide lines and time lines for development delivery and evaluation of programs.
5. Disparity between budget designs used in individual colleges and difficulty in accessing clear information.

CRITICAL AREAS FOR IMPROVEMENT

1. Part-time instruction.
2. General fund support of WLP.
3. Training and Staff Development.
4. More release time for coordinator.
5. Continued development in areas of curriculum, assessment, recruitment and evaluation.
6. More participation by business partners.
7. Establishment or guidelines and time-lines to produce necessary reports.
8. Better communication between all members or the Consortium.

APPENDIX III

Skill Builders Newsletters

Skill Builders

A publication of the Columbia-Willamette Skill Builders Consortium

Volume 1 Number 1 January 1991

Training enhances workplace skills

Imagine you're a warehouse worker with 20 years of experience. You know where merchandise is stored, and you know the quickest route to get to it. You handle a forklift like Steffi Graf handles a tennis racquet.

You've proven time and again that you're reliable, efficient, and able to follow orders. You make decent money, enjoy your co-workers, and have always felt secure in you job.

That was before word came down about the computers. You'll have to learn how to operate them, to read instructions and work orders, to locate merchandise in the re-designed warehouse, to order stock when it's low, and to collaborate with other employees in newly formed "work groups." Suddenly, the warehouse that's been as familiar as home for two decades is a forbidding place.

And while your bosses have promised training to learn the new system, you feel that your world is coming apart.

That scenario, while fictitious, is not all that far-fetched. Veteran workers throughout the country are threatened by changes in the workplace. But it needn't be that way. Some companies – although it would be stretching the truth to say a lot of companies – have begun systemwide reforms aimed at strengthening worker roles and responsibilities with an emphasis on workplace literacy and training.

The need for job-related literacy training is widespread, says Daniel Marschall of the AFL-CIO's Human Relations Development Institute. "We have to look more carefully, do a lot more research, and really develop this area of on-the-job training in a structured and systematic way," he says. And, he adds, there is a critical role for "workers training and teaching one another in the context of the workplace, and in an environment that also values continuous learning."

Such workplace training is not limited to the veteran employee who feels threatened by automation.

Many entry-level workers are ill-prepared to perform the high-level skills required in today's workforce. Some are high school dropouts. Others are marginal graduates. All place a burden on employers, public institutions, and society. "Even among those who graduate from high school, it is estimated that one in six may be function-

Continued on Page 3

Consortium links industry, labor, education

In Oregon, as elsewhere in America, advanced technology and tough licensing laws are radically altering even the most rudimentary kinds of work.

On the assembly line, in the warehouse, or at the construction site, the worker who can't keep pace with changes in the workplace faces stagnation or, worse, unemployment.

To help workers succeed and advance in their careers – and to help employers compete and profit in the marketplace – a network of Oregon community colleges, businesses, labor unions and educational consultants have linked up to form the Columbia-Willamette Skill Builders Consortium. The 18 consortium members have forged partnerships to train 300 workers in job-specific basic skills.

The 18-month demonstration project, funded by a $399,000 U.S. Department of Education grant and matched by $227,000 of in-kind contributions from the partners, will focus on northwest Oregon, primarily the Portland metropolitan area. Three community colleges – Portland, Mt. Hood, and Clackamas – will work with eight businesses and industry associations and six labor organizations to address the workplace literacy needs in the fields of carpentry and construction, food products, heavy manufacturing, small business light manufacturing, trucking, and warehousing. The Northwest Regional Educational Laboratory is providing overall project design, coordination, and technical assistance.

> *"The purpose of the consortium is to develop training that is appropriate to these industries, all of which are key to northwest Oregon's economy."*
> – Steve Reder

"The purpose of the consortium is to develop training that is appropriate to these industries, all of which are key to northwest Oregon's economy," notes Skill Builders project coordinator Stephen Reder, director of NWREL's Literacy, Language, and Communication Program. "The training will be a mixture of job skills and basic skills."

The consortium's business partners have identified specific areas of their industries

Continued on Page 2

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'America's Choice' details options for future workplace

America is headed toward an "economic cliff" that could widen the gap between "haves" and "have nots" in society unless employers change the way they do business, warn the authors of *America's Choice: High Skills or Low Wages!*

"If basic changes are not made, real wages will continue to fall, especially for the majority who do not graduate from four-year colleges," the report from the National Center on Education and the Economy notes. "The gap between economic 'haves' and 'have nots' will widen still further and social tensions will deepen."

To avoid such social and economic calamity, the report recommends that:

• A national educational performance standard be set for all students, to be met by age 16. This standard should be benchmarked to the highest in the world.

• States take responsibility for assuring that virtually all students achieve the Certificate of Initial Mastery. Through the creation of local Employment and Training Boards, states, with federal assistance, create and fund alternative learning environments for those who cannot attain the certificate in regular schools.

• A system of Technical and Professional Certificates and associate's degrees be created for the majority of students and adult workers who do not pursue a baccalaureate degree.

• All employers be given incentives and assistance to invest in further education and training of workers and to pursue high productivity forms of work organization.

• A system of Employment and Training Boards be established by federal and state governments, together with the local leadership, to organize and oversee the new school-to-work transition programs and training systems.

> **'If basic changes are not made, real wages will continue to fall ... The gap between economic 'haves' and 'have nots' will widen still further and social tensions will deepen.'**

To order the full report, send $18 to the National Center on Education and the Economy, PO Box 10670, Rochester, New York 14610.

Partnerships strengthen workers, workplace

from Page 1

where rising basic skills requirements are jeopardizing the job security of current and future workers as well as the long-term and short-term ability of the industries to remain competitive.

The labor partners have identified testing and certification requirements that their members must be trained to meet. Examples of areas workers and businesses are working to improve are:

• Production operators at Oregon Cutting Systems are improving basic skills in statistics, writing, reading, math and computer use;

• Increased requirements in the new federal licensing standards for the trucking industry may keep as many as 30 percent of truck drivers off the road if they do not find ways to improve their basic skills and pass the certification exam; and

• Introduction of new production technology at Nabisco, Inc., requires line employees to become computer literate. Employees also will need to improve their problem-solving skills.

Clackamas Community College is working with a major manufacturing firm – Oregon Cutting Systems – to design customized curricula for the company.

A similar project is in its early stages with another major manufacturing firm, Precision Castparts. Training is being offered through classes and individual, self-paced study, either at home, at the worksite, or at the college's Targeted Learning Center.

Mt. Hood Community College offers classes both on campus and at union halls to carpenters and general construction workers, truck drivers, and warehouse workers. Carpenters and construction workers can take classes on subjects such as reading blueprints, using calculators, construction measurements, and understanding documents and specifications.

Courses for truck drivers include training for a number of mandatory exams in such topics as air brakes and hazardous materials identification. Warehouse workers are taking instruction to prepare for future automation.

Portland Community College is designing curricula for teaching job-related basic skills to workers at Nabisco, LWO Corp., and Leupold & Stevens, Inc., the college's small business manufacturing and food products partners.

Training addresses such issues as on-the-job communication skills, team building, job advancement, and changing technologies.

Consortium enlists 18 participants from labor, industry, education

Consortium members are: Associated General Contractors of America, Inc., Oregon-Columbia Chapter; Clackamas Community College; Fred Meyer, Inc.; International Brotherhood of Teamsters, Chauffeurs, Warehousemen & Helpers of America, Union Local No. 162 and Union Local No. 206; Joint Council of Teamsters No. 37; Leupold & Stevens, Inc.; LWO Corp.; Mt. Hood Community College; Nabisco, Inc.; Northwest Oregon Labor Council, AFL-CIO; Northwest Regional Educational Laboratory; Oregon Cutting Systems; Oregon Office of Community College Services; Oregon Trucking Associations, Inc.; Oregon-Washington Carpenters/Employers Apprenticeship and Training Trust; Precision Castparts Corp.; Portland Community College; and United Brotherhood of Carpenters & Joiners of America, Local Union No. 247.

Successful programs improve workers' job skills

Continued from Page 1

ally illiterate," note Thomas Sticht and Barbara McDonald in *Making the Nation Smarter*, a report published by Applied Behavioral and Cognitive Sciences, Inc., of San Diego. "Low literacy levels are related to unemployment, welfare and poverty. These problems are considered to contribute to low productivity in the workplace, which is a large concern as the United States appears to be losing its competitive edge in the world marketplace."

The problems are compounded when one considers that the growth in population is among minority youth, who, the authors say, are "the very group that constitutes the largest percentage of dropouts, unemployed, and welfare and poverty groups." If the pattern continues, "there will be an ever-widening gap between the haves and the have-nots."

That sentiment was echoed by Ira Magaziner at a recent conference in Portland. "Today, we have the most unequal distribution of income of the 22 industrialized countries of the world," said Magaziner, Chair of the Commission on the Skills of the American Workforce.

"If basic changes are not made, real wages will continue to fall, especially for the majority who do not graduate from four-year colleges. The gap between economic 'haves' and 'have nots' will widen still further and social tensions will deepen," warns the Commission in *America's Choice: High Skills or Low Wages!*

Among the Commission's recommendations is one that would provide incentives and assistance to employers who invest in education and training of their workers and pursue high productivity forms of work organization. Already, some companies are involved in far-reaching workforce training and restructuring of the workplace.

At US West Communications in Oregon, union employees and management have been working toward four general goals: quality performance and services, continuous improvement, worker participation, and lifelong learning.

The process involves "elimination of a whole lot of bureaucratic, mid-level managers as well as introduction of self-managed workforces," notes Marsha Congdon, CEO of US West Oregon. "It means helping our people to learn to be coaches and knowing what it means to be a part of a self-managed work team."

'We have to really develop this area of on-the-job training in a structured and systematic way.'
– Daniel Marschall
AFL-CIO

'It means (learning) to be a part of a self-managed work team.'
– Marsha Congdon
CEO, US West

Educators, too, are seeking ways to better prepare young people for the workplace. But there are barriers that must come down and stronger bridges that must be built, says Portland Public Schools Superintendent Matthew Prophet. In planning for the 1990s, the Portland district found that some of its technology equipment and materials were World War II surplus.

Schools, Prophet says, are unable to purchase the high-tech equipment to properly train students. What is needed, he adds, are stronger links between schools and business, industry, service, and labor organizations to provide students a training ground with state-of-the-art equipment and employees who know how to use it.

Jorie Philippi, an expert on workplace literacy training, adds that entry-level workers need training for today's jobs. And, she says, that training needs to address job-related skills.

Philippi says that the growing number of "intermediate literates" – those who read at about the 6th-7th grade level – have special learning needs that must be addressed in the workplace. "These special workplace applications of basic skills are generic to many different occupations," she notes in *Developing Instruction for Workforce Literacy Programs*, a publication of Performance Plus Learning Consultants, Inc. of Springfield, Va. Applications include:

- Job reading processes for locating information and using higher level thinking strategies to problem solve;
- Occupational writing processes for organizing clear, readable writing, and for mastering thinking skills which enable analysis, elaboration, and extension of written ideas; and
- Workplace applications of math processes for calculating information and solving problems that enable workers to acquire proficiency levels in reasoning and interpretation.

"Successful workforce literacy programs need to focus on literacy tasks that workers encounter regularly on the job," Philippi says. "And the measure of program success is not in terms of grade-level gains or GED test scores or other academic achievement statistics – it is determined instead by the amount of postprogram improvement in job performance demonstrated by participating employees."

The Columbia-Willamette Skill Builders Consortium is seeking just such a marriage between workforce literacy and workplace skills. Future editions of *Skill Builders* will focus on programs at some of the eight participating worksites.

Additional reading

The following are some of the publications that address issues related to workplace literacy and basic skills training in the context of the workplace.

An America That Works: The Life-Cycle Approach to a Competitive Work Force, by the Research and Policy Committee of the Committee for Economic Development (CED), New York, 1990. Comprehensive framework for examining the relationship between sweeping demographic changes and the world of work. Provides examples of specific company programs designed to create opportunities and incentives for individual workers to continue to learn, grow and be productive. Makes recommendations for public and private policy changes to prepare youth for rewarding working lives, help adults be self-sufficient and socially responsible through productive work and skill renewal, and keep older citizens active and independent. Available from CED, (202) 688-2063.

The Bottom Line: Basic Skills in the Workplace, Washington, D.C.: U.S. Department of Education and the U.S. Department of Labor, 1988. Provides guidelines for setting up workplace literacy programs. Presents brief overview of changes in the workplace and workforce; describes five general steps to perform a literacy audit and to determine job-specific basic skills requirements and whether the workforce has those skills; and focuses on steps to solve workplace literacy problems, including design of the training, goals, available resources, recruitment, partnerships, curriculum, and evaluation. Good section on additional sources of information. Available from the Government Printing Office Book Store, Portland, (503) 221-6217.

Worker-Centered Learning: A Union Guide to Workplace Literacy, by Anthony R. Sarmiento and Ann Kay, AFL-CIO Human Resources Development Institute, Washington, D.C., 1990. Clearly presented guide to developing effective workplace literacy training based on workers' needs, learning styles and interests. Addresses the problem of defining and understanding "workplace literacy" with information on common misconceptions. Provides nine steps for designing worker-centered programs (that benefit employers, too). Offers guidelines valuable for any workplace literacy program, whether union-based or not. Available from AFL-CIO Human Resources Development Institute, (202) 638-3912.

Workplace Basics: The Essential Skills Employers Want and *Workplace Basics Training Manual*, by Anthony P. Carnavale, Leila J. Gainer, and Ann S. Meltzer, American Society for Training and Development (ASTD), Jossey-Bass Publishers, San Francisco, 1990. Comprehensive discussion of skills needed for today's rapidly changing work world, and step-by-step manual for assessing the need for developing and implementing performance-based, functional context training programs. Needed skills include: learning how to learn; reading, writing and computation; speaking and listening; solving problems and thinking creatively; managing personal and professional growth; working with others; and leadership and influence skills.

SKILL BUILDERS

The newsletter of the
Columbia-Willamette Skill Builders Consortium

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The Consortium is an 18-month demonstration project funded by a $399,000 U.S. Department of Education Grant (No. V198A00158) to Portland Community College and matched by $227,000 of in-kind contributions from the partners. The content of this publication does not necessarily reflect the views of the department or any other agency of the U.S. government.

Skill Builders

A publication of the Columbia-Willamette Skill Builders Consortium

Volume 1 Number 2 March-April 1991

Workplace skills training involves 'joint survival'

Functional context approach relies on support, cooperation

Efforts to provide job-oriented basic skills training for employees need the support and cooperation of a long list of players – from the chief executive officer to mid-level managers to union leaders to individual workers.

If any of the participants drop out, the training program could crumble, cautions Jorie Philippi, an expert in functional context education and a consultant to the Columbia-Willamette Skill Builders Consortium. "Building a partnership is not an easy thing to do," Philippi says. "It takes patience, planning and formal communication."

If the training program also involves college-level instructors, the need for formal communication becomes even more acute. "Get involved with the educators early on," Philippi says. "They come from a different community and have different goals."

The Skill Builders Consortium includes specially trained community college instructors who provide basic workplace skills training to employees from participating companies. That special training is necessary because of the different goals of the community college classroom and the company warehouse. "In an academic context, people read to learn things," Philippi says. "With functional context education, you read to do. You locate something, and you use it."

Functional context education is built upon the needs and goals of employers and is based on the tasks that employees use on their jobs. An employer may seek to reduce mistakes, cut down on accidents, or eliminate waste. Or, a company may be going through a technological change that requires new skills of its employees. The idea, Philippi says, is to focus on one or two of the areas where improvement is sought and to build a functional context program around them.

"With functional context education, you read to do. You locate something, and you use it."

– Jorie Philippi

The process involves interviews with and observations of employees as they perform their jobs. This "literacy task analysis" provides clarification of the job-performing thinking strategies that the workers use and lays the foundation to develop a functional context curriculum.

"We want to see how *competent* people think in performing specific tasks," Philippi says "We can then build scaffolding for other employees to use."

The idea is to identify basic skills applications to use as instructional objectives in a job-specific training program. For example, if workers need to convert fractions to decimals, they can learn to do so in a training program that uses their workplace experiences to illustrate the process.

"The functional context approach builds on a worker's prior experience on the job," Philippi says. "It provides mental hooks for workers and validates what they already know."

Such workplace training can be used in large corporations or small businesses, although partnerships involving community colleges or other educational institutions need to be forged to make the process affordable to smaller companies.

For example, a community college that offers a course in blueprint reading could design the material to meet the job-related needs of small companies. "We're looking at the community colleges to become regional providers to increase the cost-effectiveness for smaller companies," Philippi says.

Philippi is executive director and founder of Performance Plus Learning Consultants. She has provided job-training basic skills for organizations ranging from the U.S. Army to Motorola, and developed a basic skills program for Hewlett Packard in Colorado to train all 1,400 of its employees using the functional context approach.

At Motorola in Schaumburg, Illinois, Philippi and four of her staff developed two training programs and outlined nine others that could be developed for worldwide marketing by the company.

Such training programs are becoming increasingly important as workforce demographics become more diverse and as the workplace relies more on critical thinking, communication, and high-tech skills of workers.

"There are still employers out there who say, 'Send me the employee with the right attitude and I'll teach him the job,'" Philippi says. Most employees, though, need a broader range of skills to address the needs of the rapidly changing workplace.

"Such training," Philippi adds, "involves joint survival for the employee and the employer."

Nabisco undergoes workplace transformation. See inside pages.

Employees broaden skills as Nabisco shifts to high-tech production process

In one room, laborers work in a cavernous area amid 10-foot tall, olive green cast iron machines that knead and mix and shape the dough that will evolve into Oreo cookies, Ritz crackers or any of a variety of Nabisco products found on grocery shelves.

The process is labor intensive: Workers hoist 50-pound sacks of flour and manually add them to the mixing bins, push carts full of ingredients around the floor, then hand-crank the rotors before engaging the steel blades that mix the dough. Each step is tended by workers who monitor the mixing process.

"This plant was built in the 1950s, and most of the equipment you see is original," says Norman Fulmer, employee relations manager at the Nabisco Company plant in north Portland.

But just a room away, the future is at work. Here, employees monitor computer screens in a well-lit room where stainless steel mixers gently whir ingredients into dough. Trainees — among them engineers, mixers, and maintenance and repair workers — huddle around a multi-colored computer screen and track each step in the high-tech baking process. In one of those rare moments when the past meets the future, workers still manually empty those 50-pound sacks into glistening bins, but it is a chore that will become obsolete when the computerized system is fully functional.

Nabisco's shift from its 1950s, heavy machine, labor-intensive baking process to the high tech of the 1990s is well under way. But during the transition, the two decades must co-exist to allow production to continue.

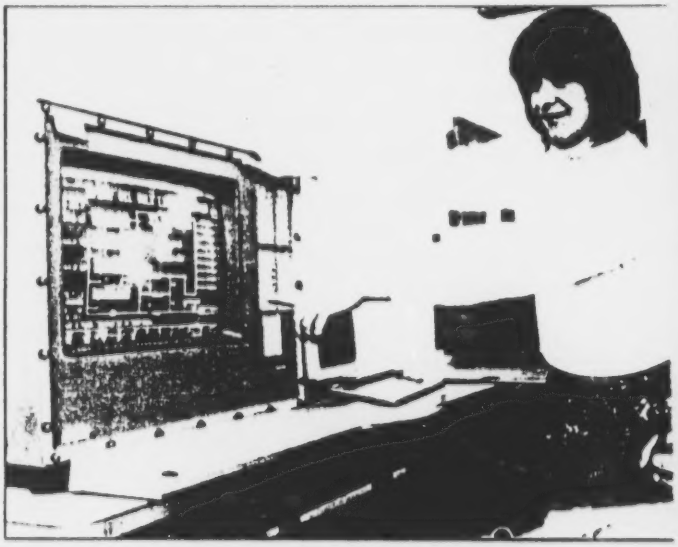
It's as if Nabisco, the giant cookie and cracker company, is teetering on the brink of an industrial cusp.

Such dramatic changes in the workplace involve much more than the technological advances that streamline production and introduce sophisticated equipment. The very nature of change in what has been a highly structured workplace can create anxiety and insecurity among employees.

In the past, workers were responsible for single tasks: a mixer, for example, would have little cause to be familiar with the responsibilities of a maintenance and repair worker or a baking crew member. The job might require a strong back, the ability to follow orders, and the insight to report malfunctions to supervisors.

With the new technology, though, employees must be familiar with all aspects of the baking process, understand workplace computers, trouble-shoot problems, convert math concepts and use calculators, read technical instructions, and communicate with other workers throughout the plant.

"We're trying to break down barriers among the various jobs here to have the employees work in teams," notes Fulmer. "While we have the technological changes occurring, we're also going through a social change."



Supervisor Teresa Watts reviews a computer program with trainee

Among the key ingredients in the changes is Nabisco's participation in the Columbia-Willamette Skill Builders Consortium. The consortium is an 18-month demonstration project funded by a $399,000 U.S. Department of Education grant to Portland Community College and matched by $227,000 of in-kind contributions from other consortium members. (See *Skill Builders*, January 1991).

At Nabisco, employees involved in the company's five-week technology and communication training are first assessed for workplace skills that will be needed in the rapidly changing plant. That assessment identifies math, reading, calculator use, and other skills that some employees need to bolster in order to work effectively in the new Nabisco plant.

Darrell Cawley, secretary-treasurer of the Bakery, Confectionery and Tobacco Workers Local 364, says such an assessment is vital for employees to improve their skills. "Most people need some extracurricular training for their jobs," says Cawley, whose AFL-CIO affiliate represents 425 of the 520 employees at Nabisco. "So setting up a program is no problem."

What is essential is to guarantee employees' confidentiality when they seek help in basic workplace skills and to clearly communicate the goals of the training. Most employees, Cawley notes, need to brush up on math or other skills. Others, though, may not know how to read and are embarrassed to admit it. "The secrets people have," he says, "they have kept well over the years."

The assessments, which were initially given in groups, are now administered privately. Only the assessor and the student learn the individual's score. Skill Builders trainer Mary Smith meets with workers confidentially to provide the job-specific skills that serve as a basic framework for the five-week Nabisco technology training.

"This program," Smith says, "provides a support system for employees before, during, and after technical training. The training involves basic skills, but with a functional context that supports the new technology and the workplace needs of Nabisco and its employees."

For example, Smith teaches what she alls "Nabisco math." The training focuses n use of fractions and decimals, math onversions, and other concepts necessary the mixing process. "We're covering an rganizational need for math skills," Smith ays. Training also involves job-related roblem-solving skills, study skills, read-ng, and computer use.

In the past, says Fulmer, many employ-es were able to perform their tasks by isually identifying ingredients, feeling for ie proper texture of dough, or using other kills developed over the years. Now, those me employees must also read and inter-et directions on a computer screen, con-vert fractions to deci-mals, use calculators, understand symbols, communicate with workers in other de-partments, and make decisions previously reserved for supervi-sors.

e Lubenow

Employees also must learn the language of computers. For ex-ample, if one has never viewed a computer screen, directions such as "Oper Resp," "Inv Bins," and "Toggle" may be as foreign as an unspoken language. Employees will view the entire baking pro-s on a computer screen and must learn v to respond to emergencies in any of the artments at Nabisco.

The computer now makes the dough," s Teresa Watts, a supervisor and trainer Nabisco. "The employees do the think-. These guys are taking on a lot more onsibility, and they're learning to make isions." And fulfilling the training needs workers suits the needs of labor and nagement alike. Especially when a plant going through the dramatic internal nges that Nabisco is experiencing.

Within the next five years, you could say 's a new plant there, but nobody in the ghborhood will notice it," notes union esentative Cawley. "They're looking ie team concept and every individual wing about every aspect of the product. re trying to enhance everyone's skills ieet that objective."

Trainer brings world of experience to functional context approach

Mary Smith's background includes work, study in India and Iran

Mary Smith has traveled the world spreading the word about functional context learning and the benefits it can bring to various cultures, workplaces, and situations.

Smith, an adjunct faculty member at Portland Community College and trainer in the Skill Builders Consortium, is preparing about 50 workers at Nabisco to effectively work with the new, high-tech mixing operation that is emerging at the baking company in north Portland.

Functional context teaching, Smith says, provides students with a familiar framework to build upon. "You try to tie the new information into the old," she says. "If you're a good teacher, you're always using a functional context approach so that your students can hang their hats on a concept that is familiar to them."

Smith has used the functional context approach for much of her 12 years as a teacher in public and private schools and in adult learning centers. She also traveled to India on a Fulbright grant as part of a 20-person team that worked with adult literacy programs in that country. And, she brought the functional context approach to Iran, where she worked for GTE/Sylvania teaching English and other skills to members of the Royal Iranian Air Force and others in Teheran.

Functional context education is not job training in the classic sense. Nor is it an adult literacy program. What participants gain are "special workplace applications of basic skills (that) are generic to many different occupations," notes Jorie Philippi, a consultant to the Columbia-Willamette Skill Builders Consortium and an expert in workplace literacy training.

In addition to giving students a frame of reference for their learning, functional context also provides a tangible reason for the student to absorb the new information. For example, learning how to convert fractions to decimals takes on new relevance when it is applied to a workplace where such conversions have become necessary because of advanced technology. It is just that type of change that the Nabisco Company in Portland is experiencing.

'If you're a good teacher, you're always using a functional context approach so your students can hang their hats on a concept that is familiar to them.'
– Mary Smith

Smith assesses employees' skills in the areas that will be necessary to develop in the emerging high-tech workplace at Nabisco. If employees need to bolster their math skills, enhance reading skills such as skimming and scanning, or improve computer skills, Smith works with them individually or in groups prior to their entry into a five-week technology training program offered by the employer.

(*Editor's Note*: Feature stories on other participants in the Columbia-Willamette Skill Builders Consortium will be included in future issues of the *Skill Builders* newsletter.)

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Additional resources

Workbook details 'functional context approach'

Step-by-step instructions to provide workplace skills program

It is likely that many employers will need to provide workplace skills training to an increasingly divergent group of employees who have little formal education or who did poorly in traditional educational settings. And with the rapid changes occurring in the workplace, it is also likely that many employers are seeking ways to train their workers to use equipment that was unimaginable until recent years.

Providing workers with basic skills that are needed to perform their jobs effectively and efficiently is the basis of functional context education. But employers must first master the training skills necessary to provide such training to their employees. The Business Council on Effective Literacy notes in its July 1990 newsletter, "The importance of designing workplace programs and assessing learning skills in terms of 'functional context' is well established by research... But functional context education is a new concept for most literacy and education professionals, indeed for businesses large and small...and few of them have the know-how to apply it."

Literacy at Work: The Workbook for Program Developers has been produced to help employers plan, set up, and operate successful workplace literacy programs.

> ***"The importance of designing workplace programs and assessing learning skills in terms of 'functional context' is well established by research."***
>
> *– Business Council on Effective Literacy*

The workbook provides detailed information on how to develop and use the "functional context approach" to implement workplace skills programs. In addition, it contains practical basic skills training options for learners at all levels as well as reasons for selecting one option over another in different situations.

Designed specifically for business owners, personnel directors, human resource directors, technical trainers, and others involved in creating workplace skills programs, the workbook features step-by-step instructions on how to develop workplace literacy program activities and materials, complete instructions on how to develop a functional context curriculum, and practice exercises that allow the user to "try it and apply it."

Developed by Jorie Philippi, founder and executive director of Performance Plus Learning Consultants in Springfield, Virginia, (see related story, page 1), the workbook is available for $200 from Simon & Schuster, Inc., Workplace Resources, P.O. Box 1230, Westwood, New Jersey 07675-9855, (800) 223-2348.

SKILL BUILDERS

The newsletter of the
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Skill Builders

A publication of the Columbia-Willamette Skill Builders Consortium

Volume 1 Number 3 May-June 1991

Union-based programs meeting members' needs

Skill Builders working with Teamsters, carpenters unions

Union-based employee education programs offer workers a trusted and reliable environment to enhance their job skills and pursue other lifelong learning goals, says a national labor leader and co-author of a union guide to workplace literacy.

"Unions' education and training programs are rooted in the needs of their members, the learners," writes Anthony Sarmiento, assistant director of the AFL-CIO Human Resources Development Institute in Washington, D.C. "They are worker-centered. This means that workers, through their union, have a central role in developing the programs. Their needs determine how the programs are designed, what they offer, and how they are taught." Sarmiento and Ann Kay are co-authors of *Worker-Centered Learning: A Union Guide to Workplace Literacy*.

The Columbia-Willamette Skill Builders Consortium collaborates with two union-based worker training programs (see inside pages). The collaboration provides functional context learning for Teamsters and entry-level carpenters who seek assistance beyond what their union already provides, says Wayne Werbel, coordinator of Mt. Hood Community College's participation in the Skill Builders Consortium. "We're responding to the needs that these unions are addressing," Werbel says. "We're not bringing in a pre-packaged plan, but designing custom plans based on their needs."

Such worker-centered learning programs are in their infancy in the Portland area. "We're still in the crawling stages in what we've been able to accomplish," says Ron Fortune of the Northwest Oregon Labor Council. "But," he adds, "we're doing well" in those programs that have begun.

There have been rough spots to iron out at the pilot projects involved in the Skill Builders consortium. At one site, worker confidentiality needed to be resolved between the union and management. At another site, scheduling has been important. "One thing we're finding," says Glenn Shuck of Labor Community Services, "is that when classes are scheduled only during the day, you're not going to reach as many people." As a result, Skill Builders trainers offer evening and daytime classes in conjunction with other union-based training sessions to reduce the amount of time workers spend away from family and friends.

In his guide, Sarmiento says it is important to communicate with workers about their needs for additional training or advanced learning. And, he adds, it also is important for unions and management to communicate clearly and understand the purposes and goals of training programs. "There must be a general understanding about what the respective roles of the union and employer will be," he writes. "From this consensus, you and the employer can plan together how the program will be carried out."

> ***'Everyone benefits when workers have a chance to renew their skills to keep pace with change in the workplace.'***
>
> *– Anthony Sarmiento*

In their guide, Sarmiento and Kay outline nine keys to a worker-centered approach to learning that includes:

- Build on what workers already know, an approach that focuses on workers' strengths, not their weaknesses
- Address the needs of the whole person: This approach recognizes that workers may want to enrich their capabilities as individuals, family members, trade unionists, and citizens; not just as employees performing a job
- Worker and union participation in developing and planning learning programs
- Participatory decision-making
- Equal access to and voluntary participation in educational programs
- Curriculum content and program structure that reflects the diverse learning styles and needs of adult workers
- Worker involvement in testing and assessment
- Confidentiality
- Literacy programs that respond to anticipated workplace changes

"Worker-centered doesn't mean that workers are the only ones who benefit from this approach to learning," Sarmiento says. "Their employers gain, too. Management and labor alike benefit from expertise that workers bring to designing and operating their programs. Everyone benefits from workers' articulation of what they need to learn and what they want to learn. Everyone gains from labor's experience with job-related skill training. Everyone benefits when workers have a chance to renew their skills to keep pace with change in the workplace."

To order *Worker-Centered Learning*, see "Additional Resources" section on the back page.

Carpenters, truckers enhance skills in union-based programs. See inside pages.

Union halls provide inviting atmosphere for workers to upgrade essential skills

Grandpa was a carpenter
He built houses and stores and banks
Chain-smoked Camel cigarettes
And hammered nails and planks
He was level on the level
Shaved even every door
He voted for Eisenhower
'Cause Lincoln won the War.
— John Prine

Songwriter John Prine's tribute to his nail-drivin' granddad addresses a time when life was simple, issues were clear, and the nuclear family was strong.

Carpentry was a craft passed down from one generation to another, and carpenters were gifted with a seemingly innate ability to determine angles, calculate complex math formulas, and convert measurements. Today, though, 30 to 40 percent of entry-level carpenters in Oregon and Washington have had little or no experience in carpentry or other building trades, says Garry Goodwin, director of instruction for the Oregon-Washington Carpenters/Employers Apprenticeship and Training Trust.

"It's becoming more and more apparent that the days of following in your parents footsteps are gone," Goodwin says. "I guess it's part of the free-wheeling nature of young people today. But people come to us with little or no skills. That's what makes it interesting to train them."

The carpenter's group linked up with the Columbia-Willamette Skill Builders Consortium to provide basic math skills as they apply to carpentry to entry-level candidates. "In the past four years," Goodwin says, "people seeking entry into the building trades programs are lacking basic skills in mathematics, which is the foundation of our program. The Skill Builders meet the needs that we have. If the apprentice is stumbling in class, he or she can get special attention and tutoring."

Mt. Hood Community College instructors Margie Taylor and Sandy Clawson provide the specialized functional context training in Skill Builders programs for both the carpenters and the International Brotherhood of Teamsters, Chauffeurs, Warehousemen & Helpers of America, Union Locals 162 and 206. Other partners include the United Brotherhood of Carpenters and Joiners of America Local 247, and the Associated General Contractors of America Inc.

For the carpenters, the two instructors have rewritten and reorganized math exercises that carpenters use daily in their work. Everything from simple addition and subtraction to determining right angles to converting fractions to decimals to figuring the area of various shapes are covered in the Skill Builders math labs.

The carpenters center has about 650 apprentices enrolled in a four-year training program that leads to certification as a journeyman. Goodwin estimates that Skill Builders trainers have met in classrooms or small group settings with about 250 of them. "The Skill Builders provides the tutoring for those people who need the special instruction to get back into the mainstream," Goodwin says.

In the program with the Teamsters, Skill Builders instructors are working with truck drivers to take a new - and tougher - commercial drivers license exam that all drivers must pass by April 1992. The federally mandated test will enhance truckers' skills and improve highway safety, says Gary Miller, benefits coordinator for Teamsters Local 162.

"Most of the drivers," Miller says, "are just tickled to death that this is coming down. They're scared of it, but they're glad to see it." Drivers' fears, he adds, are of taking tests, not mastering skills. "Developing a test-taking strategy is very, very important. It's a matter of teaching the drivers to look at every word, knowing what they're reading, and retaining information."

Carpenter apprentices work on a structure d

Truckers are a proud lot, Miller says, and welcome the opportunity to enhance their image and to upgrade their skills. "They get worried about their image. Drivers are very proud of what they do. They provide a vital service to this country."

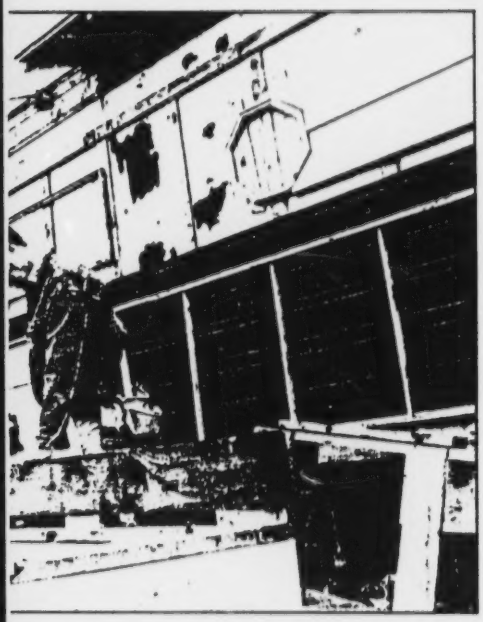
Skill Builders instructors Clawson and Taylor help prepare drivers who seek additional assistance for a battery of tests. The type and number of tests that drivers must pass are determined by the type of commercial vehicles they drive. All drivers, though, must pass a general knowledge exam that serves as a framework for other specialized tests.

The Teamster local provides a day-long seminar for drivers that concludes with the new CDL test. Drivers who do not pass often seek tutoring through the Skill Builders program.

"We saw a need for additional help for some of the people who couldn't get through the book," Miller says. "The Skill Builders was a natural place to go. With the seminars and the Skill Builders tutoring, I don't think there will be very many who won't pass."

Drivers are allowed to take an exam up to eight times, and must retest only those exams they do not pass. For example, a driver could pass the general knowledge test but fail hazardous materials. In order to transport such materials, the driver would have to retest until passing.

Union-based workforce skills training



uring a week-long training exercise

addresses the needs of workers in the changing marketplace, says Wayne Werbel, coordinator of Mt. Hood Community College's participation in the Skill Builders Consortium and a workplace literacy specialist with The Center for Community and Economic Development at the school.

"There was a time when a strong back, a good work ethic, and agile hands could get you a job," Werbel says. "People didn't care if you could read or write or calculate because it wasn't needed on the job."

But those jobs are rapidly disappearing, and workers are expected to operate computers, work in groups, communicate across job lines, read, write, calculate, and make decisions that previously were reserved for supervisors.

Skill Builders, which focuses on developing a job-specific curriculum after conferring with employees, managers, and labor representatives, can provide valuable training and build the confidence of workers faced with a changing workplace.

"We're responsive to the needs that workers are raising," Werbel notes. "We're not bringing in pre-packaged plans. We're designing custom plans based on their needs. It's a functional context approach.

"We're also helping people build confidence in their ability to learn, to develop self-esteem," Werbel adds. "Most of them have not had positive experiences with the education system. Skill Builders is really providing an outreach service."

Former grade school teachers find union work stimulating

What's a couple of former grade school teachers doing working on math and reading and test-taking skills with a bunch of truckers and carpenters?

"I've always been interested in workplace literacy and workforce education," says Margie Taylor, who, with Sandy Clawson, helps prepare truckers and carpenters for some of the changes in their respective crafts. "It's exciting to get into the workplace and develop programs based on workers' needs and skills."

Clawson and Taylor have worked in the adult basic education program at Mt. Hood Community College for about 10 years each. The college, the Teamsters, and the Carpenters Union are among the 18 partners in the Columbia-Willamette Skill Builders Consortium.

MARGIE TAYLOR

Clawson and Taylor, who both received their undergraduate degrees in elementary education, provide individual tutoring and small-group training for union-based projects geared to help truckers pass federally mandated commercial drivers license tests and entry-level carpenters brush up on their math and computer skills. In the truckers program, Clawson says, the emphasis is on test-taking skills such as focused reading, retaining information, building study skills, and enhancing self-esteem.

Neither Clawson nor Taylor have much experience driving trucks or nails, but both are old hands at teaching new concepts to adults. The projects have been educational for the two MHCC instructors, as well. "When a driver comes in, we know that they have the knowledge, the prior skills, the hands-on experience," Clawson says. "We're not trying to teach them how to drive a truck. But we *do* know how to read the books and we *can* teach them how to take the test."

Likewise with the carpenters, where Clawson says she knew "zilch, zero, nothing" about carpentry before beginning the Skill Builders project. Designing pre- and post-lesson assessments was a challenge that was eased with the help of the entry-level carpenters in the program. "We'd say to them, 'You explain to me how we could better write this. What is it about this exercise that you don't understand, so we can make it better?' So the input from the students has been important in writing the curriculum for the program."

SANDY CLAWSON

That approach, says Glenn Shuck of the Labor Community Services, is important for instructors working with adults on workplace skills. "We got the right personalities in our instructors," Shuck says. "And that's really important — to make sure that the instructors have an idea of the people they're going to be working with. Probably the most important aspect in developing a program is to talk to the workers."

And that, Shuck adds, is one of the strengths of the functional context approach that develops curriculum based on the job-related needs of workers and employers. "I think you can start with a canned package," he says.

"But if you stick to that canned package, you'll fail. You need to be talking to the workers and finding out what they need, how you can be more helpful to them, how you can better meet their needs."

Community colleges, too, are an important participant in developing and implementing workforce skills training. "In most areas," Shuck says, "the community colleges are going to have to be a part of the system. It's like a carpenter's union rep told me: 'We'll teach 'em the hammers and nails stuff, but the math and the areas that are changing, we'll leave that to the community colleges.'"

BEST COPY AVAILABLE

Additional resources

The following are some of the publications that address issues related to worker-centered literacy and basic skills training. For a more complete listing, see *Worker-Centered Learning: A Union Guide to Workplace Literacy*, by Anthony Sarmiento and Ann Kay, AFL-CIO HRDI, Attention: Workplace Literacy, 815 16th St. N.W., Washington, D.C., 1990.

AFL-CIO Committee on the Evolution of Work. *The Changing Situation of Workers and Their Unions*, Washington, D.C., February 1985. In this policy statement, the AFL-CIO looks to the future needs of workers in a changing workplace.

AFL-CIO Department of Economic Research. "Training: A Key Role for Unions," *AFL-CIO Reviews the Issues Series*, Report No. 38, December 1989. This four-page paper summarizes how unions are using education and training as a tool to help their members as well as to recruit new ones. The paper describes negotiated education and training efforts in different industries.

Alamprese, Judith. "Adult Literacy Research and Development: An Agenda for Action," Southport Institute for Policy Analysis, Southport, Conn., December 1988. Alamprese recommends a national agenda for research and development projects as a means of improving the theory and practice of adult basic education. She discusses the limitations of present grade-level testing tools for measuring adult literacy levels and comments on alternative performance measures such as competency-based assessment systems and applied performance measures.

Carnevale, Anthony P., Leila J. Gainer, and Ann S. Meltzer. *Workplace Basics: The Skills Employers Want*, American Society for Training and Development and U.S. Department of Labor, Washington, D.C., 1988. Written from a management perspective, this research report acknowledges the importance of worker concurrence in workplace learning programs.

Harman, David. *Illiteracy: A National Dilemma*, Cambridge Book Co., New York, 1987. Harman, an education professor at Columbia University Teachers College, discusses lessons learned form literacy programs, among them: that programs should relate to learners' personal goals; that peer support encourages learning; and that volunteer efforts alone can't solve the country's basic skills problems.

Sarmiento, Anthony. "Workplace Literacy and Workplace Politics," *WorkAmerica*, National Alliance of Business, Washington, D.C., September 1989. Sarmiento discusses the dangers of literacy audits and the reasons why workers need to be involved in planning a workplace literacy program.

SKILL BUILDERS

The newsletter of the
Columbia-Willamette
Skill Builders
Consortium

Stephen Reder, *Project Coordinator*
Tony Kneidek, *Editor*

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The Consortium is an 18-month demonstration project funded by a $399,000 U.S. Department of Education Grant (No. V198A00158) to Portland Community College and matched by $227,000 of in-kind contributions from the partners. Mt. Hood and Clackamas community colleges are other educational participants in the Consortium. The content of this publication does not necessarily reflect the views of the department or any other agency of the U.S. government.

Skill Builders

A publication of the Columbia-Willamette Skill Builders Consortium

Volume 1 Number 4 July-August 1991

Issues abound in workplace ESL programs

Assessing needs of workers essential in developing programs

The need for teaching English to a new and emerging American workforce will increase dramatically in the coming years. And programs developed to address those needs must go beyond the teaching of workplace English, says Nikki Sullivan, chair of the Adult Basic Education Department at Portland Community College.

"English as a Second Language (ESL) is like an onion," Sullivan says. "Every time you peel away a layer, you have another one to deal with."

Language is not the only barrier for immigrants in the workplace. Other issues involved in workplace ESL programs include cultural differences, historical conflicts, and educational disparities.

"There are so many different people from so many different countries with such a wide range of educational experiences," says Sullivan, a workplace literacy specialist and coordinator of PCC's involvement in the Columbia-Willamette Skill Builders Consortium.

In addition to sizeable Hispanic and Southeast Asian communities, the Pacific Northwest has an emerging central European population. Immigrants from Romania, the Soviet Union, Czechoslovakia, and Yugoslavia are settling into the area, bringing with them a culture, work ethic, and lifestyle far different from those of their new neighbors.

Among the problems in establishing a workplace ESL program, Sullivan notes, is that the various nationalities have no way of communicating with each other. "There's no way for the Southeast Asians to talk to the Russians or for the Russians to talk to the Chinese."

When the cultural differences are considered, the difficulties are magnified. For example, the Vietnamese, Cambodians, and Laotians have been fighting in their native lands for years. In their new culture, they're expected to overcome centuries of hostilities to work as team members on their jobs.

And workers from the emerging central European populations come from a culture where asking questions of authorities may have been hazardous to their health. "Romanians are coming out of one of the most repressive regimes in the last 25 years," Sullivan says. In countries where asking too many questions could result in imprisonment or death, people learn the value of remaining silent.

> ***'English as a second language is like an onion. Every time you peel away a layer, you have another one to deal with.'***
>
> ***– Nikki Sullivan***

It is essential, Sullivan adds, to break through such cultural differences and to teach employees to ask questions and to think critically. That is especially important among the ESL workers who come from cultures where speaking out was not considered a strength. "The American culture understands the concept of speak up and speak out," she says. "They have a system they can access. The ESL people are not in that system yet."

"We can go in and teach safety to workers," Sullivan says. "But in addition to teaching them to read and understand safety signs, we have to get the workers to break out of that silence and ask questions of supervisors when they see something wrong."

Employers' demands of workers have changed in recent years. And in some companies, workers are now expected to participate in workgroups, to communicate with workers in different jobs, and to solve problems that previously were the responsibility of supervisors.

Even that is only part of the challenge in addressing ESL in the workplace. "The biggest part of the problem for us is the range of workers' educational backgrounds," Sullivan notes. "We have people with doctorates in their own language and we have those who are illiterate in their own language." Difficulties arise in determining how best to assess such workers as well as determining how best to address their educational needs.

Workers, employers, and ESL instructors must not confuse the ESL skills taught on the job with the more intensive programs offered by community colleges. For example, a community college ESL program involves 16 hours a week of classroom work for an indefinite period of time. By contrast, ESL at the workplace may involve three hours a week for up to 10 weeks.

That brings up what Sullivan calls the "classic difference between education and training. Education is long term and takes in the whole person," she says. "Training is basically short term and focused on a specific goal. The motivation is there. People know that the more training they get, the more promotable they become. But you can't promote everybody on the assembly line. There are only so many jobs available to move up to."

While some companies are dedicated to changes in the workplace, others are lagging behind. Corporate attitudes about worker training must shift along with changes in the workplace, Sullivan says.

In the future, she adds, industries could pool their resources to provide training for immigrant workers. That way, workplace training could be available to workers throughout the state.

For example, if nurseries in the state each contibuted $1,000 to the nursery association for worker training, an ESL curriculum could be established and training provided to nursery workers on a statewide basis.

Such widespread training, which also is needed in the electronics and other industries, could address cultural aspects of the job, social issues, and other changes that immigrant workers face, Sullivan notes.

ESL programs beneficial to both employees and employers. See inside pages.

ESL training helps workers develop job, social skills

by Sharon DeBusk

It's Tuesday afternoon at Leupold and Stevens, and the wheels of production are turning as workers from around the globe assemble the components of sports optics equipment. For 85 years, the Beaverton company has churned out binoculars, sporting scopes, and telescopes for rifles, and hydrological measurement equipment.

But on this weekday afternoon, six employees are gathered in a company conference room for a different task — they're tinkering with the English language. The mood is upbeat as the employees — natives of Cambodia, Vietnam, Mexico, and the Philippines — gather in the room for an ESL (English as a Second Language) class held twice a week at the workplace.

Instructor Megan Esler, a part-time teacher at Portland Community College and an ESL specialist, chats with one student about her favorite foods — shrimp and crab. One student boasts that he has eaten rattlesnake. Another student breezes into the room, eager to share snapshots from his recent trip home to Mexico.

For the next 90 minutes, the group reads stories from a newspaper together. Esler helps them separate the main idea from the details of each story. They discuss the meaning of "guess" and "estimate," "withstand" and "risk." They talk about "the poverty line" and the different meanings of the word "crude." They focus on idioms, such as "making a mountain out of a molehill."

The class is part of Leupold & Stevens' participation in the Columbia-Willamette Skill Builders Consortium. ESL classes also have been offered at LWO Corp., a small wood-products manufacturing company in Portland.

At Leupold & Stevens, company managers recognized that many workers needed to strengthen their reading, writing, and other basic skills. While the company has "quite an ethnic mix of employees," says Jim Gilles, manager of human resources, the need to enhance workplace skills extended to other workers in the company's workforce, which reaches 500 in peak summer months.

Many employees could sit at their workstation and assemble a product, but they couldn't read or fill out a performance evaluation, Gilles notes. Language barriers prevented some employees from asking for clarification, reporting problems on the job, or making suggestions for improvement.

New sophisticated machine tools and rapidly changing technology are making it more important than ever to have skilled employees. "We're going to have to train our people to do the jobs here, and one of the basic issues is getting them to the level where they are trainable," Gilles says.

The first eight-week session was designed and taught last fall by PCC instructors Linda Clarke and D'Anne Burwell. In that session, lessons were based on the needs of the workplace and the language skills needed to perform specific jobs. However, instructors found that employees were well equipped to perform their jobs, but hungry for language skills that would help them communicate better with their co-workers. The ESL employees, Esler notes, felt a need to learn English for reasons other than job performance. "They told me they didn't want to feel 'stupid' on the assembly line with their friends," Esler recalls. "I'm teaching what I call cultural literacy."

Megan Esler and students in an ESL class at Leupold & Stevens

Esler works on critical thinking exercises and teaches some technical English. "I try to teach some formal words they might run across in manuals, so if they run across the word 'excessive' they know it means 'extra.'"

The class also reads the company newsletter, which has given workers insight into how the company operates. The group is working on writing a letter about their ESL class to submit to the newsletter, Esler says. Students also are learning how to fill out performance evaluations in the class.

Esler says students in her class are gaining confidence. "We're working on group process," she says. "They're learning how to speak up in meetings." Such skills may help employees who are reluctant to inform supervisors of problems or to offer suggestions because of language barriers or cultural differences.

While the program has provided a learning experience for students, the instructors and the company have benefited, too.

For example, classes initially were offered only after work hours, and attendance suffered as a result. To address that concern, the eight-week session that started in May was split, with half of it conducted on company time and half on worker time.

"It was a way of answering those concerns," Esler notes. "For the workers, it says they cared enough to stay after, and for the company, it says it cared enough to give workers release time." Leupold & Stevens also offered two quarters of math taught by MHCC instructor Margie Taylor.

Like Leupold & Stevens, LWO Corp. (formerly Lattice Works of Oregon) was concerned about communication problems at its manufacturing plant. About half of the company's 100-125 employees are Hispanic and another third are Southeast Asian. Language barriers are heightened by a noisy environment in which workers wear face masks and earplugs.

Ann Schneider, a part-time instructor at PCC and a trainer and marketer for a welfare reform project at MHCC, was a major force behind LWO's workplace English program. After joining the project in June 1990, she assessed the language skills of about 45 workers and interviewed company managers.

In an effort to meet the goals of the Skill Builders grant, the program was geared to help workers in specific job-related tasks such as following and giving directions, giving feedback, and reporting problems. Those areas were chosen because they were common to a wide variety of workers — department heads, lead and production workers, forklift operators, and others who would be taking the classes.

But other needs began to surface. "The feedback was, 'I know my job,'" Schneider says. "They wanted to work on pronunciation and grammar and write more narratives. They wanted to be able to write letters to friends, things like that."

Richard Campbell, who taught English at LWO with Schneider, agrees. "It became obvious that employees were interested in a more general approach," says Campbell, a part-time instructor at PCC and full-time coordinator of the MHCC refugee ESL program.

"We began to change the focus from real specific language they would use at Lattice to more what they would use everyday in basic conversation," Campbell says. "At breaktime, you wouldn't want to talk about Lattice. You might want to talk about the Trail Blazers."

Beginning and intermediate level ESL classes were held for day and swing shifts. Forty to 50 workers were served throughout the year, but instructors and the company sought increased attendance.

In addition, the company identified more specific needs. For example, managers became concerned about waste on the job when they discovered that many employees could not correctly use a tape measure. "They couldn't break down an inch into a half, a quarter, and a sixteenth," Campbell says.

As a result, the program may move into a new phase. Campbell and fellow instructor Margie Taylor will look into designing a three- to six-hour training segment that can be taught in-house on company time. The training will include some English and basic math skills that new employees could preview upon being hired.

Schneider says the new approach would be more effective, partly because it would be offered on company time. "When a training is looking at work performance, it should be on company time — or at least half and half," she says.

If she had to do the program again, Schneider says she would establish a formal process to learn what workers want before she established a curriculum. "I talked to all the managers, but there needs to be a way to get to know the needs of the workers so they'll be more invested." Schneider later found that interviews conducted in workers' native language were most useful for understanding their perspectives on the purpose and focus of the training.

Schneider commended LWO for its cooperation. "The staff was very willing to work with me all along the way," she says.

Steve Cameron, quality assurance manager for LWO, says not all employees see the benefits of learning workplace English. "It's difficult for people who put in eight hours of rather physical work to understand how English would help in such a noisy environment," he says.

"It doesn't work for everybody," he adds. "But it was a marvelous opportunity for many."

ESL instructors bring range of experiences to program

When Megan Esler was growing up in Western Pennsylvania, Thanksgiving and Christmas dinners in her home were always shared by guests from other countries.

For Ann Schneider, a fascination with helping migrant workers and refugees learn to work and survive in our culture began in the 1970s.

And Richard Campbell has been working with refugees and migrant workers for more than a decade.

The three have brought worlds of experience to companies involved in the Columbia-Willamette Skill Builders Consortium.

Esler credits her mother for helping her form a multicultural, global approach to the world. "My mother was involved with a United Nations association," she recalls, "and she always had people over at the house. They would give me dolls—I still have this foreign doll collection."

Megan Esler

Esler has translated an early love of languages and other cultures into a career and a way of life. In 1977, she began teaching ESL through the Adult Basic Education (ABE) department at Portland Community College. The ABE programs provide schooling for American students up to the 12th grade and can lead to GED certification. Esler also worked for PCC's Refugee ESL Project, where she helped develop jobs through the college's Refugee Employment Project. She returned to the ABE Department in 1983, where she continues to work today.

Esler has had many opportunities to teach higher-level English, but prefers to teach those with a more critical need. "I always come back to the real adult world where people are trying to raise a family, get a job, and survive in our culture," she says.

That's why the opportunity to teach at Leupold & Stevens as part of the Skill Builders Consortium appealed to her. "I enjoy working-class people who are dealing with an immediate need," she says.

Schneider, who spearheaded the English program at LWO, currently works full time at Mt. Hood Community College as a trainer and marketer for Steps to Success, a welfare reform project for clients with limited English-speaking skills. Since 1978, Schneider has been involved in pre-employment programs, preparing people with limited English skills to go to work. A part-time PCC instructor, she has taught ESL at several other community colleges. She also worked at PCC's Refugee Employment Project and the International Refugee Center of Oregon.

"I have had an interest since the '70s in working with clients who are migrant workers or refugees," she says. "They not only need English skills, but they need to understand our culture. It's a fascinating interplay."

Ann Schneider

Campbell, coordinator of MHCC's refugee ESL program and a part-time PCC instructor, has taught in the adult education refugee program since 1979. "The program is designed to help refugees get on their feet — to give them enough English so they can go out and get a job," he says.

At LWO, Campbell taught ESL with Schneider and PCC instructor Sally Huntley. Campbell says that English needs to be learned in an environment that provides ongoing reinforcement. He questions whether short-term workplace programs are practical for teaching the language.

"It's a lifelong learning thing versus an immediate company need," he says. Companies may need to offer English programs on an ongoing basis if they want to see real improvement in workers' communication skills. And, he adds, community colleges are better suited to teach ESL.

Esler, though, says students benefit from workplace English programs. "We're taking English classes to people who can't get to class," she says. Community colleges run into the same time considerations that company ESL programs encounter when employees are expected to attend them after work. "These people are going to bed at 8:30 to get up by 5:30 to go to work," Esler says.

And, she adds, the ESL classes at Leupold & Stevens are more workplace oriented than classes taught in community colleges. "At school, we touch on housing, banking, shopping, employment, and health," she says. "Here, the basic frame of reference we kept coming back to was the workplace."

Additional resources

Several clearinghouses can provide brief state-of-the-art papers and mini-bibliographies on the issues of literacy training for limited-English-proficient (LEP) adults and teaching English as a Second Language (ESL) in the workplace. Among them are:

National Clearinghouse on Literacy Education (NCLE)
Center for Applied Linguistics
1118 22nd St., NW
Washington, DC 20037
(202) 429-9292 FAX (202) 659-5641

ERIC Clearinghouse on Languages and Linguistics
(see Center for Applied Linguistics, above)

ERIC Clearinghouse
on Adult, Career, and Vocational Education
Center on Education and Training for Employment
The Ohio State University
1900 Kenny Road
Columbus, OH 43210-1090
(614) 292-4353 or (800) 848-4815 FAX (614) 292-1260

Examples include:
Fellars, Allyson. *Minibib: Workplace Literacy*, National Clearinghouse on Literacy Education (NCLE), Adjunct ERIC Clearinghouse, Center for Applied Linguistics, Washington, DC, June 1990, 2p. Provides annotated list of workplace literacy and ESL training reports and manuals available through ERIC. Available free from NCLE.

Buchanan, Keith. *Vocational English-as-a-Second-Language Programs, ERIC Digest*, ERIC Clearinghouse on Languages and Linguistics, Washington, DC, June 1990, 3 p. (ERIC #ED 321 551). Provides a quick overview of different approaches to vocational English-as-a-Second Language teaching: (1) the ESL approach; (2) the vocational approach; (3) the work experience approach; (4) the workplace approach; and (5) the bilingual vocational training model. Available free from the ERIC Clearinghouse on Languages and Linguistics.

Lopez-Valadez, Jeanne, Ed. *Immigrant Workers and the American Workplace: The Role of Vocational Education*, Information Series No. 302, ERIC Clearinghouse on Adult, Career, and Vocational Education, Columbus, OH, 1985, 56 p. (ERIC #ED 260 304). Presents issues and strategies used to prepare limited-English-proficient adults for employment. Discusses different types of ESL teaching and a model for vocational ESL; differences in cultural values and adjustment and the need for cross-cultural training; approaches for diverse training needs of LEP adults; and employment services for these adults. Available from the Clearinghouse on Adult, Career, and Vocational Education.

To obtain publications listed in the Educational Resources Information Center (ERIC), call 1-800-USE-ERIC or 1-800-873-3742.

SKILL BUILDERS

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Skill Builders

A publication of the Columbia-Willamette Skill Builders Consortium

Volume 1 Number 5 **February-March 1992**

Skill Builders Consortium serves nearly 900

Partners cite successes and lessons learned

I felt involved in being 'world class.'

—Warn Industries employee

Being "world class" is what it's all about. Since you read the first issue of *Skill Builders* in January 1991, the Columbia-Willamette Skill Builders Consortium has continued to help workers and employers achieve their goals. Eight companies and more than 848 workers have participated in the consortium's classes and tutorial labs.

The 18 labor, industry, and education partners collaborated to provide workplace-based instruction in basic math and measurement (shop math), basic writing, computer basics, commercial drivers license test preparation, English in the workplace, and individual skills enhancement.

The consortium was formed in early 1988 in response to a growing awareness of the need for improved workplace literacy training and coordinated service delivery in Northwest Oregon. In 1990, the U.S. Department of Education awarded a $399,000 grant that was matched by $227,000 of in-kind contributions from the partners. The money laid the framework for the consortium to work toward two major goals:

(1) To help workers become lifelong learners who will continue to upgrade their skills and maintain their competitive, productive capacity as their job skills requirements change, and

(2) To demonstrate and disseminate a workplace literacy consortium model that builds the capacity of educational providers and businesses, industries and labor organizations to provide cost-effective workplace literacy training.

The consortium has far surpassed its original goal of serving 300 workers. As we near the end of the grant, nearly three times that number have participated to upgrade their skills. The Skill Builders instructors committed long hours to learning about the various worksites and designing training appropriate to workers' and employers' needs. Their dedication paid off.

"I personally took most of the classes," notes Phyllis Groelle, an employee at consortium partner Leupold & Stevens. "Math was not one of my better subjects, either. The review of fractions and decimals was very helpful. We even worked in areas where I had never ventured before, and it was fun and an interesting challenge."

Adds Mike Bowman, who studied for his commercial drivers license through a consortium partnership, "This program gave me confidence ... to pass the general knowledge test. From there I went on to pass the rest of the other six tests ... Without this program and the sincere help and instruction...I wouldn't have known where to begin. The manual seemed so big and hard at first. ... Hazardous materials is last. I'll study more and I know I'll pass it."

Managers, too, were impressed by their involvement in the consortium. "Due to the overwhelming acceptance and success of the previous program, we are proposing adding the following crafts — roofer, floor coverers and painters (tapers)," says Garry P. Goodwin, director of instruction, Oregon-Washington Carpenters-Employers Apprenticeship & Training Trust Fund.

Toni McConnell, training and development director at Warn Industries, says the consortium helped her company focus on its workplace needs. "What the grant has done for us is above and beyond what we would have had the resources to provide: a knowledgeable, responsive in-house instructor who could also wear the hat of program developer and produce relevant Warn materials ... I commend you for your foresight in requiring participants to pay part of the tab for such training and education. I think it makes companies clarify what they want to accomplish and accept ownership of accountability."

> ***'What the grant has done for us is above and beyond what we would have had the resources to provide: a knowledgeable, responsive in-house instructor who could also wear the hat of program developer ... '***
>
> ***– Toni McConnell***

At Nabisco, Clark Nelson, personnel manager, said his employer has pledged to continue its efforts at upgrading workplace basic skills. "We are ... committed to contributing to the consortium's services by paying for instructor time in class as well as reimbursing our employees for their time as participants. This reflects the high level of our satisfaction with the Skill Builders program."

In addition to the skills, knowledge, and confidence provided to workers in the Northwest, the partners of this workplace skill-building consortium have also learned a great deal. Our "lessons learned" are embodied in the following recommendations for effective workplace training programs:

- Expand your vision of workplace literacy training to be a process of organizational and human resource development.
- Give high priority and sufficient resources to the careful design and development of quality curricula that address changing needs for new skills and encourage workers to become lifelong learners.
- Make the program worker-centered by building in a comprehensive worker involvement component that includes workers from all levels in all phases of the program (from needs assessment through training design, delivery and evaluation).
- Provide release time or other forms of employee compensation for hours in training.
- Design the evaluation to include context-appropriate evaluations of learner skill acquisition and job outcomes, building on company and worker criteria for improvement.

Despite gloomy economic forecasts, changing workplace technology, and a barrage of criticism aimed at the American worker, recent studies show that only one of 12 frontline workers receives any formal training on

Continued on back page

Warn Industries: On the cutting edge of changes in the workplace

Release time, pay for knowledge enhance worker training at forward-looking firm

Stories by Sharon DeBusk

To the casual observer, Warn Industries in Milwaukie looks like a standard factory, with its maze of machinery and stacks of shiny parts.

On the shop floor, workers in safety glasses manufacture and assemble the products Warn is known for — 4-wheel drive hubs, winches, and light truck accessories. Workers are familiar with the language of off-road travel.

But upstairs in a small classroom, away from the din of the factory, a small group of employees is learning a new language — the language of computers. The class is part of Warn's participation in the Columbia-Willamette Skill Builders Consortium. Basic math also is being taught as part of the program.

Scott Copeland, workplace literacy instructor through Clackamas Community College, tells his computer students to type the following paragraph: "No matter what job you have, computers are headed your way. To save time and reduce errors, computers will be used extensively in the manufacturing environment."

The paragraph is only a keyboard exercise, but it points to the major changes underway at Warn Industries.

Two year ago, Warn realized that the company would have to change its way of doing business if it was to survive the competitive international market, according to Toni McConnell, training and development director for Warn, which employs about 440.

The company began taking measures to streamline manufacturing, improve quality and involve employees. In July 1990, Warn eliminated two layers of management and has since been converting to "product focus teams."

Previously, the company was divided into departments, such as manufacturing, assembly, planning, purchasing, finance and administration. Now, 15 product focus teams operate like mini-businesses within the plant. Each handles its own ordering, purchasing, engineering, manufacturing, assembly and shipping. "It's an all-out attack on waste," explained McConnell.

The changes have had a dramatic impact on workers.

For example, a machinist "will have to solve problems and communicate, may talk with customers, may do assembly work or computer work," McConnell said. "Whatever it takes to get the job done, you must now be trained and willing to do."

Company leaders knew they would need a highly educated, skilled and flexible workforce to carry off their plan. But before workers could be trained in new jobs, they needed to brush up on basic skills.

To address needs, Warn began to offer basic math, blueprint reading and communication classes. In the meantime, the Skill Builders Consortium was formed, and Clackamas Community College began working with Warn Industries and Oregon Cutting Systems, another Milwaukie firm involved in the consortium. Copeland was hired to teach at both businesses.

At Warn, Copeland interviewed employees and supervisors to determine what kind of classes they needed. While math classes had been offered, employees said the material wasn't relevant to their jobs.

"Instead of just teaching addition, subtraction and percentages, he took all the generic questions and put them in Warn language," McConnell said. "He made it relevant to what they do."

For example, Copeland teaches the math skills necessary to figure out how many hubs will fit into a certain sized shipping box. In another exercise, a worker might be asked to build racks on a wall in a workstation. Copeland teaches the employee how to use fractions and decimals to figure out the correct dimensions.

Copeland said he served about 100 students since the beginning of the year in three quarters of math classes.

BEST COPY AVAILABLE

The computer classes were even more popular. Copeland, who wrote a computer handbook especially for Warn, is in his fourth eight-week teaching cycle. He estimated he has served 134 computer students.

Two factors have made the grant project particularly successful at Warn, Copeland said. First, all required classes are offered on paid time. "When people aren't paid to be there, or if they're paid part time, that hurts attendance," Copeland said. "People have other priorities – kids to pick up, spouses to share nights with. It's not that they don't want to learn."

Another factor is that the classes Copeland teaches count toward a program at Warn called "Pay for Knowledge."

Pay for Knowledge is a compensation system that bases wages and salaries on knowledge and skills rather than the position or job performed. At Warn, pay increases are tied to the number of different jobs an employee can perform.

Workers gain knowledge by taking classes and/or testing out in various "skill blocks." The company also offers classes in statistics, basic machines, measuring instruments and precision tools.

"It allows the employee to have more control over salary," McConnell said. "You walk up the skill blocks to get knowledge you need to make the wage you want."

Like Warn Industries, Oregon Cutting Systems has been concerned about basic skills in the workplace. Formerly known as Omark Industries, the firm makes various cutting systems for commercial and agricultural uses as well as consumer products such as pruning saws and hedge trimmer blades.

And like Warn, work teams are becoming prominent at Oregon Cutting Systems. "In the past, some people punched parts and others sharpened them, assembled, packaged and shipped them," explained Gale Long, training manager for Oregon Cutting Systems, a subsidiary of the international construction company, Blount Inc. "Now it's a team doing all those things for a specific type of product," he added. "So all of a sudden we need a much wider skill set."

When Oregon Cutting Systems signed on with the Skill Builders Consortium, the company had already identified literacy as an issue it wanted to address. But when Clackamas Community College surveyed employees, it was computer knowledge, not reading, that emerged as the area most needing attention.

Copeland offered several sections of computer classes and worked with a few individuals on math. However, the company has not offered the grant-sponsored classes on paid time.

"As an organization we haven't been able to justify paying people," said Long. "We still believe it's a mutual challenge between employer and employee. We're going to make it available, but they have to have some ownership, too."

Helen Humphreys, basic skills instructor and Skill Builders coordinator at Clackamas Community College's Targeted Learning Center, said the compensation issue is important. "Companies either need to pay for some percentage of classes or there needs to be a clear line of advancement after learning the skills," she said. "Adult learners need to know where they are going with a class."

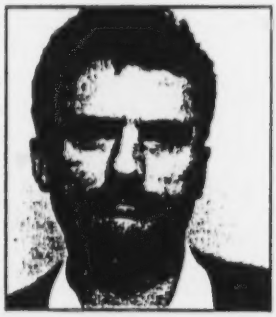
Confidentiality also is an important issue for employers to consider when establishing basic skills workplace training programs. "Companies have to assure workers that what we learn about them won't be used against them in the workplace," Humphreys said.

At both Warn and Oregon Cutting Systems, employees concerned with privacy can attend classes at the Targeted Learning Center, which is located near the companies.

From dockworker to literacy instructor, Copeland brings variety to workplace

Scott Copeland has been a dockworker, a restaurant manager, a hardware and paint salesman, and a job analysis specialist. And he's taught psychology and statistics at the college level. "I have a lot of real-world experience," he says.

These days, Copeland goes by the title "workplace literacy instructor," and he offers his skills teaching math and computers to employees at Warn Industries and Oregon Cutting Systems, two Milwaukie firms involved in the Columbia-Willamette Skill Builders Consortium. (Warn Industries recently hired Copeland as full-time training coordinator).



Those backgrounds in both the professional and blue-collar worlds may explain why Copeland is highly regarded by associates and students alike. His quiet way can be deceiving, though. "He's really soft spoken and low key," says Helen Humphreys, instructor and Skill Builders coordinator at Clackamas Community College's Targeted Learning Center. In fact, when Clackamas first hired Copeland as a trainer in the Skill Builders project, Humphreys had reservations. "He's so low-keyed that at first I was a little concerned about whether he could do the job," she says. "Well, it turns out he can do it!" Humphreys recalled that Copeland wasted no time getting to know people at Warn Industries. "He was making himself at home without getting into anyone's way – making himself a part of that culture."

Toni McConnell, training and development director for Warn Industries, agrees. "I can't say enough nice things about Scott. He was able to dig in without much direction or supervision. He's the kind of guy you would invite to a big family shindig because he would do whatever needed to be done."

The soft-spoken Copeland admits that he relates well to workers. "I know what work is like as opposed to someone who is coming out of education. They have strengths, too, but they have to realize that these people don't think of themselves as students. They think of themselves as workers."

Copeland has long been interested in workplace literacy. Last year, he completed a master's degree at the University of Arkansas/Little Rock in applied industrial psychology with an emphasis on training and learning. He worked as a training specialist at Little Rock Municipal Waterworks and later put together a reading program for truck drivers.

Copeland has strong beliefs about helping today's workforce become more skilled. "It's not just a nice thing to do," he says. "It has to be done in order to be more flexible. If we don't do this training, our jobs will go overseas."

And if you haven't noticed it already, Copeland enjoys working in the manufacturing field. "I like the working class, the blue-collar workers," he says. "They're open. They don't pull any punches, and they're not out to show you they've got all the answers."

Consortium partners praise 18-month project

From page 1

the job. The Columbia-Williamette Skill Builders Consortium obtained the commitment of business partners to provide part of the cash support for ongoing training development and instruction. Unfortunately, the consortium's application for a second National Workplace Literacy grant was declared ineligible due to a technicality. Therefore, this issue of *Skill Builders* is our last until further funding is obtained.

However, consortium partners remain committed to the provision of effective workplace training. If you are interested in providing appropriate training in your worksite, you may receive more information about services available by contacting:

Adult Basic Education Department
Portland Community College
(503) 777-6911
Karen Stone
Director of Employee and Management Development
Clackamas Community College
(503) 657-8400, ext. 3523
Michael Dillon
Director of Community and Economic Development
Mt. Hood Community College
(503) 667-7225
Stephen Reder, Director
Literacy, Language and Communication Program
Northwest Regional Educational Laboratory
(503) 275-9591

Skill Builders Consortium includes diverse partners united to improve skills

Consortium members include: Anodizing, Inc.; Associated General Contractors of America, Inc., Oregon-Columbia Chapter; Clackamas Community College; International Brotherhood of Teamsters, Chauffeurs, Warehousemen & Helpers of America, Union Locals 162 and 206; Joint Council of Teamsters No. 37; Leupold & Stevens, Inc.; LWO Corp.; Mt. Hood Community College; Nabisco, Inc.; Northwest Oregon Labor Council, AFL-CIO; Northwest Regional Educational Laboratory; Oregon Cutting Systems; Oregon Office of Community College Services; Oregon Trucking Associations, Inc.; Oregon-Washington Carpenters/ Employers Apprenticeship and Training Trust; Portland Community College; United Brotherhood of Carpenters & Joiners of America, Local Union No. 247; and Warn Industries, Inc.

SKILL BUILDERS

The newsletter of the
Columbia-Willamette Skill Builders Consortium
Stephen Reder, *Project Coordinator*
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The Consortium is an 18-month demonstration project funded by a $399,000 U.S. Department of Education Grant (No. V198A00158) to Portland Community College and matched by $227,000 of in-kind contributions from the partners. Mt. Hood and Clackamas community colleges are other educational participants in the Consortium. The content of this publication does not necessarily reflect the views of the department or any other agency of the U.S. government.

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APPENDIX IV

Final Evaluation Report

Jorie W. Philippi

Performance Plus Learning Consultants, Inc.

Performance Plus
Learning Consultants, Inc.

Basic Skills for Business and Industry

April 6, 1991

Dr. Stephen Reder
Karen Wikelund
Northwest Regional Education Laboratory
101 SW Main, Suite 500
Portland, OR 97204

Dear Steve and Karen:

Enclosed please find the Final Evaluation Report for the Columbia-Willamette Skill Builders Consortium U.S. Department of Education Workplace Literacy Project. As you probably already know, the project achieved-- and even exceeded-- many of its stated goals, the most significant of which was probably the sharing of resources among the three community colleges in the consortium. And, of course, the strongest evidence of success in any of these projects is when the business/labor partners continue programs beyond the grant period. You can all be proud of the foundation you have built for workplace literacy with these organizations.

I've enjoyed having the opportunity to work with both of you on this project and hope that Performance Plus Learning Consultants can be of service to you again in the future.

Sincerely,

Jorie W. Philippi,
Executive Director

7869 Godolphin Drive • Springfield, VA 22153 • 703-455-1735

Columbia-Willamette
Skill Builders Consortium
Workplace Literacy Project

Evaluation Report

FINAL REPORT

Prepared by

Jorie W. Philippi

March, 1992

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Prepared by Performance Plus Learning Consultants, Inc.

Introduction

Background: The Columbia-Willamette Skill Builders Consortium for Workplace Literacy Programs in the Portland, Oregon area was developed in conjunction with staff members from Portland, Mt. Hood, and Clackamas Community Colleges, along with Northwest Regional Education Laboratory and the Oregon Office of Community College Services, primarily through funding provided by an 18-month grant award from the U.S. Department of Education. The program was granted a 3-month no-cost extension and operated as a national workplace literacy project demonstration from June 1, 1990 through February 29, 1992 to determine the effectiveness of the Consortium's proposed workplace applications of basic skills training model.

The need for this project grew from a recognition by local businesses and industries that the pressures of competition in a global marketplace have accelerated the pace of change in workplace environments. The expanding and shifting responsibilities of manufacturers and businesses in transition from Taylorism to a Total Quality Management system via self-directed cross-functional work teams, increasing technological demands and reduced production cycle times, along with the advent of national testing requirements for operators and drivers, have created an interest among employers and workers alike to enhance use of the workplace basic skills needed by the Portland area labor force to meet these challenges. Because technical training-specific courses and traditional education often do not give workers a broad-based knowledge of team communication, problem-solving, critical thinking and learning-how-to-learn concepts and competencies, participating companies and labor organizations determined the need for instructional programs that would provide workers with workplace basic skills applications that are transferable and adaptable to their changing work environments.

Area companies and labor organizations began discussions with the Consortium community colleges midway through 1988 to foster the sharing of information and to clearly define company/ worker needs and agency responses. This careful exploration of possibilities resulted in the partnering to apply for federal grant monies to provide on-site programs. Managers and labor leaders representing the organizations' training and education departments met with the consortium program developers and formed an advisory council. It was the responsibility of this council to ensure that the customized programs directly related to the competencies needed for the workplace and responded to the needs of

the targeted worker participants. To this end, the members were committed to gathering data for performing a "front-end analysis" in order to assess the communication and problem-solving needs of targeted worker-participants. They also determined programs' goals, lengths, schedules, and implementation plans.

The developers of the programs, members of the Columbia-Willamette Skill Builders Consortium, then custom-designed, created and delivered the instructional materials. During development, sharing of concepts and personnel occurred among the three community colleges, thus providing amplification of both resources and the program review process. A variety of strong programs were subsequently implemented and refined during the grant period. Portland Community College, as the grant financial manager, contracted with Performance Plus Learning Consultants, Inc. to serve as a third-party evaluator throughout the project.

Purpose of the Evaluation: The Columbia-Willamette Skill Builders Consortium has requested this third-party evaluation of their U.S. Department of Education Workplace Literacy Demonstration Project to assess 1.), the extent to which the project's goals and objectives have been accomplished, and 2.), the extent to which program development and implementation proceeded as planned. Specifically, the evaluation objectives to be investigated were:

- on-going identification of the program's strengths and areas still needing any improvement throughout the life of the project;
- evidence that workplace literacy partnerships were built among business, educators, labor, government and community groups;
- evidence that workplace training developed during the project linked basic skills instruction directly to the literacy requirements of actual jobs targeted for specialized adult basic education training programs and addressed the increasing basic skills requirements of the changing workplace;
- evidence that the project programs implemented targeted and delivered services to a minimum of 300 workers with inadequate skills for continued

employment, increased productivity or career advancements and offered support services to learners that reduced the barriers to participation in literacy training;

- evidence of a smooth instructional flow of activities within the developed curricula, reflecting a sound developmental approach to mastering those literacy skills necessary for competent performance of identified job tasks;

- evidence of increased productivity due to improved literacy skills of program participants;

- evidence of the development and use of record-keeping and documentation systems, including collection, interpretation and reporting of data on program development and implementation activities and on individual progress of participants; and

- evidence of successful program implementation through the use of appropriate processes for participant recruitment, class scheduling, development of individual education plans, curriculum delivery, pre- and post-assessment, and instructor training and support, that are academically and organizationally sound and that match with program goals.

Additionally, recommendations were requested on the issues and concerns about consortium model replicability, limited to data gathered from observations, survey and test results, anecdotal records and interview information.

Description of the Project to be Evaluated: The Columbia-Willamette Skill Builders Consortium Workplace Literacy Project consisted of eight workplace literacy training partnerships formed between three greater Portland area community colleges and businesses, industries, and labor organizations, with assistance from Northwest Regional Education Laboratory, a not-for-profit educational research organization, and the Office of Community College Services. The original demonstration project partnerships were as follows:

Clackamas Community College and:

- Oregon Cutting Systems- manufacturer of cutting edges for industry, specifically for the timber industry at this location.

- Precision Cast Parts Corporation- manufacturer of large cast metal parts for aviation industries.

Mt. Hood Community College and:

- Associated General Contractors, Inc.; Oregon-Washington Carpenters/Employers Apprenticeship and Training Trust; United Brotherhood of Carpenters & Joiners Local 247; Northwest Oregon Labor Council AFL-CIO- independent building and construction companies plus member labor organizations.

- Oregon Trucking Associations; Fred Meyer, Inc.; International Brotherhood of Teamsters Local 162; Joint Council of Teamsters No. 37; Northwest Oregon Labor Council AFL-CIO- independent trucking firms, local retail shipper/ receiver, plus member labor organizations.

- Fred Meyer, Inc.; International Brotherhood of Teamsters and Warehousemen Local 206; Joint Council of Teamsters 37; Northwest Oregon Labor Council AFL-CIO- retail warehouser, plus member labor organizations.

Portland Community College and:

- Leupold & Stevens, Inc.- manufacturer of sports optics and hydrographic instrumentation

- LWO Corporation- manufacturer of wood products (lattice)

- Nabisco, Inc.- food products manufacturer

During the course of the demonstration, Fred Meyer, Inc. and Precision Cast Parts Corporation terminated their participation due to circumstances external to the project. The Consortium recruited the replacement partners of Anodizing, Inc., an aluminum extrusion manufacturer, and Warn Industries, a winch and hubcap manufacturer. Also, the carpentry and trucking programs involved insurmountable political problems among cooperating partners during early stages of the grant period and subsequently shifted their focus to highlight labor-sponsored delivery of services.

According to the published description of the program, the design of the project was structured to meet workers' job-specific basic skills application needs through the development of functionally contextual curricula. On-site investigation and job analysis conducted by community colleges' staff resulted in the development of an assortment of curricula and instructional delivery formats tailored to meet the various employer/worker needs of each of their partners. Brief descriptions of each program follow:

Oregon Cutting Systems: The program began as on-site mini version of the college education lab, Targeted Learning Center, offering individualized coursework in GED prep, math and reading skills; it expanded to nine-hour topic courses, created in response to worker suggestions, that included business writing and business English; it evolved into an ongoing, individualized workplace math study group and well-attended work-related computer basics and keyboarding courses. The math group utilized two commercial texts, Mathematics for Machine Technology (Delmar) and Basic Essentials of Mathematics (Steck-Vaughn), along with a 55-page customized Statistical Process Control (SPC) Math curriculum. The computer class utilized a customized 64-page text, Cutting Through to Computer Competency. The company provided a computer lab for course use. Methods of instruction for both courses included one-on-one with instructors and group discussion, where applicable.

Warn Industries: The program began as an on-site basic math class; it became a 55-page customized SPC course, Warn Shop Math, and 33-page customized, work-related, project-centered computer basics and keyboarding course, PCs at Warn.

Open-exit classes met for 1 hour, twice per week, with most participants finishing after 16-20 contact hours. An additional "catch-up" class was also offered to assist workers whose job schedules precluded their attending regular sessions.

Oregon-Washington Carpenters/Employers Apprenticeship and Training Trust; United Brotherhood of Carpenters & Joiners Local 247; Northwest Oregon Labor Council AFL-CIO: A drop-in learning center was operated on-site to provide support in mathematics to apprentices participating in intensive 1-week construction trade courses, four times per year, as part of a 6-year work/study program leading to journeyman status. Pre-apprentices also were tested and provided with evening one-on-one tutorial assistance in math as requested. The center operated for two days each week, opening for 3-hour periods, with two instructors present. Customized mathematics instructional materials (93 pages of worksheets, handouts, and forms plus topic pretests and posttests) were developed for use in conjunction with job tasks requiring reading blueprints, calculator use, algebra, geometry, and specific measurement conversions. Student attendance at the center was voluntary and varied from 1 to 6 hours.

International Brotherhood of Teamsters Local 162; Joint Council of Teamsters No. 37; Northwest Oregon Labor Council AFL-CIO: A drop-in learning center was operated at the Teamsters Meeting Hall to provide study sessions and materials to assist union truck drivers with preparing for the Commercial Drivers' License test. The center was open for 12 hours each week, operating on varied hours to accommodate drivers' schedules. Participation was open-entry, open-exit, with attendance prior to passing the test averaging 11 hours. Curriculum consisted of 10 activities, each with instructor directions, handouts, manipulative materials and study cards, plus pretests and posttests, to accompany the Oregon Commercial Motor Vehicle Operator's Manual. Additionally, audio-visual supplemental materials were available for use as needed.

Anodizing, Inc.: On-site math instruction was provided by 3 instructors in 20-hour classes, meeting 1 hour per week during employee lunch breaks, on clock time. The course included 54 pages of worksheets, handouts, pretests, posttests and overhead transparencies within three units addressing place value, whole number operations, measurement, fractions, decimals, percents, and computing tolerances. Several

examples of Anodizing, Inc. job materials were integrated into each instructional unit to demonstrate the application of math concepts taught to job performance. One-on-one and small group instructional techniques were utilized in delivery.

Leupold & Stevens, Inc.: Two separate segments of instruction were conducted on-site. During the beginning months of the project an English as a Second Language (ESL) program was offered in two 8-week cycles of 1.5 hour classes, 2 times per week. Commercial materials, Preparatory Technical English (Pittman) and News for You, along with the Leupold & Stevens monthly newsletter, were used to assist participants with understanding and using vocabulary related to work situations and current events in order to increase social and cultural comfort within work teams, complete written performance reviews, and describe hypothetical problems requiring thinking skills. A blueprint math applications course utilizing the vehicle of a scientific calculator was developed and provided during the second half of the grant period. Math applications addressed included decimals, fractions, measurement, averages, ranges, metric conversions, and basic trigonometric functions. Classes of 2.5 hours duration were offered 2 times each week, for two groups simultaneously, each with its own instructor, during 4-week cycles of instruction. Materials consisted of an eclectic selection of topics and pages from commercially available math texts, (sources not identified). Each instructional unit incorporated at least one example of a Leupold & Stevens workplace situation or job material that utilized the math concepts being taught.

LWO Corporation: Two levels of English for the Workplace classes each were conducted for 1.5 hours, two times each week, using 3 instructors, on a fall and spring semester-like schedule of 7-week cycles over the period of the grant. Classes were located in a small house adjacent to the factory. The first level courses focused on spoken vocabulary development and utilized a Total Physical Response method to address instructional topics related to work situations requiring following directions, clarifying directions, giving directions, giving information to clarify, and giving feedback. Job materials, photos, tools, wood products, supplies, etc., were integrated into each lesson. The advanced level course concentrated on improving reading and writing skills, along with oral language skills. Commercial materials used included, Speaking Up at Work (Oxford American English) and English for the Workplace, ESL for Action (Addison-Wesley), as well as "The Key," a page from

the Oregonian. Individual interests of participants guided the content of most advanced level lessons, with only secondary serendipitous emphasis being placed on work-related topics. A Buddy System, pairing non-native speakers with workers who were native speakers or more proficient speakers of English was operated throughout the period of the grant as well.

Nabisco, Inc.: Support classes in math were integrated into 5-week company technical training for converting to computerized equipment installed in several departments of the plant. The math component, "Nabisco Math," was delivered during 12-15 hours spread throughout one week of the technical instruction. Each cycle of training had 8-10 participants. Materials were customized to assist workers with newly required job applications of math and study skills presented in the training. Three hours were devoted to study skills and information locating skills, and an additional three hours were dedicated to learning calculator use skills. Following this training, a second segment of instruction continued throughout the grant period, "Skills Enhancement Training," an open-entry, open-exit learning center designed to assist workers with basic skills brush up in reading and math. Instruction was built around learner-instructor jointly developed Individual Education Plans and utilized workplace materials and manuals as well as commercially available adult education instructional materials. Customized assessment instruments were also developed for several plant departments. Many participants worked toward departmental certification with support from the Skills Enhancement Training. Attendance was as high as two to three hours per week for periods up to eight months in duration per learner.

Method

Design: The evaluation of the Columbia-Willamette Skill Builders Consortium Workplace Literacy Demonstration Project employed a modified version of the Context-Input-Process-Product (C.I.P.P.) model, (Stufflebeam & Guba, 1971). This method of evaluation was chosen by the evaluator as the most suitable tool for investigating the evaluation objectives, (see pages 4-5), because it examines project effectiveness through structured analysis of the cohesiveness of project goals, components, and operations, independent from comparisons to outside standards or other programs.

The C.I.P.P. model was used to analyze:

- Context (i.e., shared goals and philosophy of key personnel and participants);
- Input (i.e., resources, including personnel, materials, time and facilities);
- Process (i.e., congruence of observed instructional development and delivery with project goals and research on instructional effectiveness); and
- Product (i.e., indicators of project effectiveness).

It is important to note that, due to the large number of partnerships and limited resources allocated to evaluation in this project, extensive and uniform investigation at all sites was not possible. Forms and procedures for use in data collection across sites were developed by PPLC and explained to representatives and staff for each partnership, as well as to the project directors from Northwest Regional Education Laboratory; however, despite oral and written communication concerning deliverables, some of the data requested was not forthcoming. Where requested data was not received, it is so noted throughout the remainder of this report.

Participants: The participants in the project were workers employed by the partner companies or members of the partner labor organizations. A brief description of the available composite average worker profiles by sites is provided below for reference.

Oregon Cutting Systems:

Caucasian female, age 36-50, with high school diploma, employed by company for more than 10 years (n =66)

Warn Industries:

Caucasian male, age 36-50, with high school diploma,

employed by company for more than 10 years (n = 210)

Associated General Contractors; Oregon-Washington Carpenters/Employers Apprenticeship and Training Trust; Unite Brotherhood of Carpenters & Joiners Local 247; Northwest Oregon Labor Council AFL-CIO:

Caucasian male, age 30-35, with high school diploma, employed full-time (n = 307)

Oregon Trucking Associations; International Brotherhood of Teamsters Local 162; Joint Council of Teamsters No. 137; Northwest Oregon Labor Council AFL-CIO:

Caucasian male, age 40-45, with high school diploma, employed full time (n = 92)

Anodizing, Inc.:

Caucasian male, age 30-35, with high school diploma' employed full-time (n = 72)

Leupold & Stevens, Inc.:

Hispanic male, age 26-35, with high school diploma, 5 years in present position with company (n = 10)*

LWO Corporation:

Hispanic male, age 26-35, 7 yrs. school outside U.S, employed full-time (n = 48)

Nabisco, Inc.:

Caucasian male, age 36-50, with high school diploma, more than 10 years in present position with company (n = 42)**

* data available from one English as a Second Language class only; for other ESL class, n = 13, for math classes, n = 35

** last data received, November, 1991

Because of the nature of the evaluation design, the focus of evaluation activities extended beyond the traditionally-held concept of "participants" to also include project administrators, the employers, labor organizations, instructors and developers.

Instruments: Data for this evaluation were requested and gathered via pre- and post-program learner surveys, structured interviews with learners and program personnel, instructor anecdotal report forms and questionnaires, supervisor ratings, and formally-documented observations of instructional sessions and instructor training. (See Appendix A for sample forms.) Additionally, data were gathered from detailed analysis by the evaluator of program documentation, instructional materials, and learners' work, (i.e., pre- and posttest scores and learners' records).

Procedure: Following initial telephone conversations with key personnel at Northwest Regional Education Laboratory to establish evaluation objectives, the evaluator conducted the activities listed below:

1. Development of Evaluation Data Collection Instruments:

   - Forms created for Participant Pre- and Post-Program Surveys, Instructor Interview, Instructor Anecdotal Records, Learner Individual or Focus Group Interview, Classroom Observation, Employer/Supervisor Interview and Supervisor Evaluations.

2. On-site consultation with curriculum developers concerning instructional curricula design and development and feedback on how to strengthen activities contained in them.

3. On-site interviews with training and production managers, supervisors, instructors, project managers and learners from the three community colleges and the partnering businesses, industries, and labor groups.

4. On-site observations of classes during various cycles of instruction.

5. Off-site analysis and review of materials and collected data from sites.

6. Communications and Operations:

- Contact throughout grant period with project through conversations with project director Steve Reder, to discuss project goals, progress, and evaluation activities and preliminary findings.

- Telephone and in-person interviews with each of the three community college project coordinators, Helen Humphreys, Nikki Sullivan, and Wayne Werbel, October 1991 through March 1992, to discuss administrative issues and concerns, evaluation data collection, and future plans for the consortium..

- Final Evaluation Report submitted to project director at Northwest Regional Education Laboratory, March 1992.

Results

Project Context:

To what extent are goals and philosophy of the project shared by key project personnel and learners?

This section of the evaluation is a comparison of the project goals and priorities as reported in project descriptions and interviews with key project personnel, including:

- project director(s)
- project designers and coordinators;
- managers, trainers & labor representatives;
- project instructors; and
- learners.

These viewpoints about project goals were analyzed for consensus and divergence.

The published project goals and purposes are contained in the grant proposal submitted to the U.S. Department of Education. They were developed cooperatively after almost one year of meetings and communication between community colleges; Northwest Regional Education Laboratory; and partnering businesses, industries and labor organizations, prior to applying for the grant monies. Stated goals and objectives in the grant proposal included:

- learner increases in specific job-related skills and in basic math, reading and writing, and English language skills;
- learner enhancement of problem-solving skills, promotability, employment prospects and increased self-confidence;
- learner access to vocational and educational counseling services;
- establishment of ongoing partnerships between industry and education;
- improved employee performance and productivity on targeted jobs and ability to adapt to changing workplaces;
- provision of tutorial/remedial support for specific job requirements, e.g., apprenticeships, certifications, promotions for a population of at least 300 participants;
- educator increased knowledge and expertise in the field of workplace literacy;
- educator enhanced knowledge of skills needed by local businesses and industries;
- expanded Adult Basic Education delivery and outreach by community colleges;
- removal of [perceived] barriers to instruction for target groups, e.g., cost, relevance, logistics, lack of confidence, childcare, transportation, and training materials;
- establishment of a regional network of workplace literacy experts and spokespersons;
- sharing of resources and expertise among consortium members;
- development of methodology for assessing workplace literacy needs;
- provision of a network infrastructure for dissemination of project results; and
- launching of a Northwest Workplace Literacy Campaign.

Project Director(s)- On June 21 and August 1, 1990, and on February 7, 1992 Stephen Reder, of Northwest Regional Education Laboratory, was interviewed about his perceptions of program goals and philosophy. Speaking for himself and NWREL, he articulated the following project goals:

- to create a stable entity for providing workplace literacy services in the Portland area beyond the period of the grant;
- to provide a comprehensive community college service to those employees whose job and residence locations do not match with existing district boundaries; and
- to enable the sharing of resources for providing workplace literacy programs among the community colleges participating in the consortium.

Project Designers and Coordinators- Helen Humphreys, Nikki Sullivan, and Wayne Werbel, Project Coordinators for each of the participating community colleges, along with college administrators Diane Connet and Pam --, and curriculum developers Mary Smith, Ann Schneider, Linda Clarke, D'Anne Burwell, Don Hartzog, Scott Copeland, Marjorie Taylor, and Sandra Clawson, were interviewed during one or more of the three site visits: July 31- August 3, 1990, November 5-9, 1990, and January 13-16, 1991. The goals expressed centered around activities, planned or in process, for individual worksite programs and/or college providers.

Five of the curriculum developers mentioned building learner self-esteem as a primary goal of programs. All curriculum developers noted that developing expertise in the techniques required for providing literacy programs for workers was very important to them, i.e. conducting needs assessment and literacy task analyses, creating functionally contextual instructional materials. They also felt that materials developed should be 50-75% work-related. The college administrators' goal statements both included frequent references to being able to use the grant to expand adult basic education programs and technologies already existing within the colleges' academic programs. All three coordinators mentioned the goal of building relationships with their business/union partners. One coordinator mentioned expansion of the college economic base and student base through on-going provision of programs for employees.

Managers, trainers & labor representatives- Garry Goodwin, Carpenter's Apprentice Program; Daryl Cawley and John Murphy, Bakers, Confectioners & Tobacco Union Local #364; Toni McConnel, Warn Industries; Gale Long, Oregon Cutting Systems; Clark Nelson and Duane Harris, Nabisco, Inc.; Gary Miller, Teamsters Local 162; and Jim Gillis, Leupold & Stevens, were each interviewed by the evaluator during one of the three site visits. Comments from all stressed the need for basic skills to support the technical training for workplace changes, certifications, etc., given to employees or members. Two mentioned the goal of having employees/members know where to look for and be able to access learning. A manager noted the goal of having employees improve their self-esteem so that they could better handle new responsibilities following planned shifts in management during future organizational flattening processes. Another manager spoke of providing an opportunity to employees to become "trainable" for rapidly changing job tasks so that the company could remain competitive and survive. Union representatives mentioned becoming alternate schools or learning centers for educating their members and giving them the support they need to maintain jobs and "get ahead" under new workplace technological skills or certification requirements. They also mentioned program specific goals of enabling drivers to get Commercial Drivers licenses, complete carpenter apprenticeship requirements, and master the operation of the computers installed at Nabisco in a timely fashion in order to keep their jobs.

Project Instructors- Each of the instructors was interviewed separately during one of the site visits. Comments indicated a desire to assist workers in mastering "real-life job problems." Many mentioned increasing learner self-esteem and helping employees "feel comfortable" with the learning process. Two instructors felt that program emphasis should be on educating the whole person and building everyday living skills, rather than on work-related skills. The others all voiced opinions that the programs' content should address at least 70% work-related skills. When asked what the most important things for an instructor in their program to do were, typical responses included, "to listen and observe," " to tailor instruction to employee's goals," and "to forget about traditional ways of teaching and think about the applications of skills taught and the reasons [employees] have for learning them."

Learners- Goals of participants were collected in structured focus group interviews during site visits and on pre-program and post-program surveys administered by project staff throughout instructional cycles. Due to time constraints during site visits, focus

groups with learners were conducted only with participants in the math program at the Carpenters Apprenticeship Trust, the CDL program at the Teamsters Hall, and the English for the Workplace program at LWO Corporation. Responses from participants in the union-sponsored programs indicated the importance of having a place to study outside of school or home, with flexible hours, as well as receiving help in the support basic skills to enable them to reach their career goals. The non-native speakers of English at LWO mentioned their desire to learn more about the language so that they could better understand situations at work and better relationships with their supervisors and managers, who communicate in English. All participants in the focus groups indicated the goal of receiving job-related basic skills training, although among beginning level participants there was also mention of wanting to not be limited to learning only job-related, employer-specific English. Responses from surveys demonstrated that most participants wanted to either upgrade current job skills or prepare for future job/ career tasks. Based on those pre-program surveys that contained an open-ended learner goal statement stem, responses indicated participant expectations were as follows:

pass the test for quality control specialist
get ready to enter junior college
improve my writing skills for the job
to learn to type on a computer
to improve on my math skills & get ready to pass the test for quality technician certification
my GED
to better my education in reading and writing
to advance
to become better with my math skills
to help me when I start my college course in manufacturing technology
be able to ask my supervisor questions
figure out problems in my spread sheets
be able to read [blue]prints better
to [be a] better employee
to learn more
update training on my current job
to become an operator
to know the calculator

to do faster set ups and faster counts
make sure I put out quality parts and insure that others do
refresh old skills
self-improvement
be proficient with percents
learn how to read decimals better
to brush up

PPLC collected and analyzed goal statements from project director, project coordinators, managers, trainers, union representatives, project designers and administrators; instructors; and participants. Because individual sites varied the forms created by PPLC or failed to collect requested goal statement information, data were available on individual learner goals only from the Leupold & Stevens math program and the programs at Warn Industries and Oregon Cutting Systems. For a discussion of areas of convergence and divergence, please see the evaluation section, "Summary of Results," under Discussion. PPLC next investigated the input of resources to the project, which is addressed in the next section of the evaluation.

Project Input:

What resources were available to the project during development and implementation and to what extent were they used effectively?

This section of the evaluation addresses major resources of the project. It includes program instructional materials, design and appropriateness for the targeted learner populations; key personnel qualifications and the match between published project duties; and facilities. It also examines the content and processes used for instructor training. The data presented in this section were analyzed for strengths and weaknesses.

Program materials- The instructional materials were designed for each of the sites after developers conducted literacy task analysis of various targeted job tasks and certifications. Documentation of the literacy task analyses was not available, but program developers spoke knowledgeably about the procedures they had used for interviewing and observing workers and analyzing materials to determine basic skills applications used in job performance. Based on company/union- identified needs published in the grant, discussions with trainers, managers, union representatives, and program coordinators from the three colleges, the choice of math, communication, keyboarding and reading-study skills contained in instructional content and objectives was that identified as necessary for participants to perform targeted job tasks or certification procedures.

Review of the curricula revealed numerous job scenarios and examples taken from workplace situations. Several programs,i.e., Leupold & Stevens' Blueprint math and LWO's advanced level ESL, adapted commercially available academic skills curricula by adding some workplace examples of skills use. Other programs, i.e., Carpenter's Apprentice math, CDL trucker study skills, Nabisco, and Oregon Cutting Systems, created customized learning materials from workplace scenarios and print materials. Two programs added to the project midway through the grant, i.e., Warn Industries and Anodizing, Inc., adapted and expanded on customized materials previously created for other programs in the project in order to expedite delivery of services to employees. Examples from workplace materials across all programs were reproduced at a high level of quality and were up to date.

The ranges of reading difficulty level for the various instructional materials appeared to match the ability levels of targeted participants. Results of language ability level diagnosis for ESL course participants and curriculum content developer-made pretests were the only measures of targeted participant ability levels. For example, ESL participants were placed in beginning, intermediate, or advanced English classes by levels of proficiency. Observations of delivery and analysis of beginning and intermediate classes at LWO and Oregon Cutting Systems demonstrated the ability of learners at each level to comprehend topics and to participate in learning activities comfortably. Cloze tests used at Nabisco indicated targeted participant comprehension levels of reading grade levels 9.0 or higher. (Scores from the BASIS test described in the grant, if they exist, were not made available to the evaluator. It is not known whether any sites administered this test to their participants or not.)

When asked about the strengths and weaknesses of instructional materials, the majority of participants thought the content reinforced skills needed to perform job tasks or complete job certification procedures. For example, 92% of participants in the Warn Industries computer class rated materials at either a 5 or 6 on a (-) 1 to 6 (+) point scale. Negative comments clustered around the desire for more time on computers and for longer classes. At Oregon Cutting Systems, participant comments about materials were similar. At Leupold & Stevens, participants in the blueprint math class indicated a desire for more practice exercises. Other programs did not collect the requested data on learners' to evaluation of materials for effectiveness.

Instructor guidelines scripted for individual course sessions were developed only for the materials used with the CDL course for truck drivers. These were in the format of one-page activity outlines that included a rationale statement, a listing of the processes and skills to be taught, a context building activity, vocabulary words to emphasize, and directions for using handouts and worksheets with learners. The LWO ESL "Buddy Program" provided 1.5 pages of directions for participants explaining overall usage of handouts. Materials from each of the other programs did not include directions for instructors; rather, they consisted of just the worksheets and handouts for instructors to use.

Key Personnel- Program coordinators from the colleges had established working relationships with their business/labor partners prior to receipt of the grant. In addition, they had some experience in providing workplace programs. For example, Nikki Sullivan

had set up and managed a number of workplace literacy programs for her college, Portland Community College, with several companies in the community.

Instructors were seasoned community college teachers with expertise and years of experience in adult basic education, English as a Second Language, and developmental studies. Scott Copeland had previous experience as a corporate trainer in designing, developing, and delivering workplace literacy programs in another state. Curriculum was usually developed by the instructors who delivered it. Other than Mr. Copeland, none had previous experience with creating functional context materials for workplace literacy instruction. Most of the instructors commented on the unexpectedly large amounts of time they needed to spend on curriculum development, well beyond the number of part-time hours for which they were budgeted and compensated.

The project directors, Steve Reder and Karen Wikelund, had been written into the original grant as project evaluators for Northwest Regional Education Laboratory; federally mandated changes in the grant structure reassigned them to the roles of project directors for activities, without control of the budget. This created some confusion as to functions of the project directors in relationship to the consortium. The coordinators from each college carried out the day to day supervision of site activities, making the administrative hierarchy somewhat superfluous. The NWREL, which was instrumental in writing the grant proposal, had allocated 10% and 15% of Reder's and Wikelund's time, respectively, to grant work as evaluators under the original structure ; in their new roles as directors, consortium members reported that this unchanged allotment proved to be insufficient time to monitor a project of this size and complexity and to provide the support needed by the college and site staffs. Comments from all three college coordinators indicated feelings of frustration resulting from the infrequent involvement with the project by NWREL staff, despite the lab's designation as being in a project leadership role.

Facilities Sessions were conducted in a variety of worksite locations. The majority were held in training and meeting rooms of partner companies or labor organizations. At the Carpenter Apprentice program, a small room was provided adjacent to the shop floor so that participants could access instruction on an as-needed, immediate basis, during trade training modules. At LWO, a frame house next to the plant was used to house classes in several refurbished rooms. All facilities observed during the three site visits appeared well lit and conveniently located, with adequate space for conducting learning activities.

Instructor Training- Initial training was provided for project staff in the form of two separate workshops, delivered by Thomas Sticht and by Jorie Philippi just prior to and during the initial stages of the grant period. The purpose of these one-time, brief workshops, (e.g., 4 hours), was to convey information to project staff about the functional context approach to workplace literacy, the conducting of literacy task analyses, and the development of workplace literacy curriculum. Curriculum developers and instructors commented that the effectiveness of these workshops was limited because of the short amount of time allocated to the in-depth training needed and because of turn-over in staff. Those who had attended the workshops often terminated relationships with the project sites, and their replacements did not receive any further training. Responses to interview questions also indicated that instructors, developers and coordinators had anticipated additional inservice training and support from NWREL throughout the project that was not forthcoming. Comments included references to "feeling abandoned," "isolated," "don't really know how to do any of this," and "simply overwhelming." Many responses focused on the lack of preparedness for dealing with the politics of workplace environments on a day-to-day basis.

Instructors reported that no formal training was provided to them on delivery of instruction in the workplace; however, since instructors and curriculum developers for programs were often the same person(s), this added the strength of complete knowledge of instructional objectives, content and activities to the delivery of many of the programs. On the other hand, those instructors hired to deliver instruction who were not involved in its creation reported that they "weren't sure what to do," and tended to articulate course goals and perceptions of their roles that were limited to traditional approaches and philosophies of school-oriented adult basic education or ESL.

For a discussion of strengths and weaknesses of available project resources and the effectiveness of their use, see "Summary of Results" under Discussion section of the evaluation. The next section of this evaluation examines the process of project delivery.

Project Process:

To what extent were program development and observed instruction congruent with project goals and research on instructional effectiveness?

Instructional Organization- Across sites, the formal class sessions held during the project were of 1-3 hours duration and met one or two times per week for 4-10 week cycles. Those sites with walk-in learning centers, such as the Carpenters' Apprenticeship math program, the Targeted Learning Center for Oregon Cutting Systems, Nabisco's Individualized Skill Enhancement program and the Teamster's CDL study course for truckers, were operated on open-entry/ open-exit formats with 12-15 hours of instructor time scheduled per week.

The nature of instruction and types of learning activities were determined through observation as well as interviews with both instructors and learners. Both learners and instructors reported that approximately 80% of instructional time was spent working independently, in small groups or pairs, with another 20% of time spent working as a whole group. Only the ESL participant focus groups reported estimated time spent in whole group instruction to be 90-95 %, while their instructors thought they spent about 15 % of instructional time working with this group as a whole class. Records from 6 class observations by the evaluator indicated an average of 39% of instructional time spent in whole group instruction employing lecture techniques. This compares favorably with an ideal of less than 50% teacher-talk during any one instructional session (Goodlad). On-site interviews and observations occurred two times during the middle phase of the project, in November, 1990, and late January, 1991.

Instructional Engaged Time- Learner engaged times during observations was quite high. Most learners appeared to want to learn, seemed to enjoy moving through the instructional units, and spent 85%-92% of time in the classroom actually participating in communication exercises. This compares with engaged times of 40%-50% reported for observations of high school classrooms (Mikulecky). Adult learners came ready to work and managed twice as much effort per hour as adolescents manage in school rooms.

Instructional Quality- The quality of instruction provided by the materials has been discussed earlier in the Input section of this evaluation. It was, for the most part, quite high. All instructors observed had established good rapport with learners and took an active role in monitoring learner progress, encouraging learners, and providing explanations when necessary. The only instances involving instructor provision of supplementary materials were observed in ESL delivery of instruction at various sites.

Solid judgements of the quality of instructor explanations of concepts are not possible given the fact that explanations and comments to learners were, for the most part, privately conducted one-on-one and could be overheard in less than a dozen instances. In these instances, however, a good deal of variation existed in instructor ability to explain the thought processes for the job-related basic skills applications procedures being taught. One instructor was able to explain several approaches to mathematics in a manner which elucidated the thought processes involved. The other instructors observed fell back to simply repeating procedures from instructional materials, stating step-by-step processes for memorization. Little or no training was provided to either curriculum developers or instructors in how to model such thought processes. This is in contrast with current preservice and inservice practices for workplace literacy instructors in both the military and private sectors that result in highly effective delivery of instruction through training that refocuses instructional delivery practices from the teaching of memorized procedures to the teaching of comprehension via modeling thought processes (metacognition).

Instructional Environment - Several unforeseen and uncontrollable external events impacted on program delivery. These ranged from union/management negotiations concerning plant down-sizing issues and seasonal layoffs to trained instructors/curriculum developers leaving the project to obtain full-time employment. The turn-over in instructors/curriculum developers became a catalyst for: a.), sharing of staff members to fill in the gaps and perform these functions for more than one of the community colleges, and b.), being able to provide "shared" staff members with multiple part-time opportunities that added up to full-time employment across programs. Labor/ management situations were resolved by holding classes on company time at one site. On a less successful note, seasonal layoffs at another program site substantially reduced participant attendance and subsequent company support for the program.

For a discussion of project process, please see "Summary of Results" under Discussion section of the evaluation. Following receipt of final data in March, 1992, PPLC assessed program outcomes (or "product") to determine the degree of project effectiveness.

Project Product:

To what extent are there indicators of project effectiveness?

The C.I.P.P. model enables gathering of evaluation data from more than one source to promote triangulation of results in an attempt to arrive at valid conclusions concerning project effectiveness. PPLC evaluated the Columbia-Willamette Skill Builders Consortium Workplace Literacy Project from three different perspectives of the users:

- participant pretest/posttest scores and statements concerning achievement of personal learning goals and value of the course(s);
- anecdotal reports from instructors, recording participant applications of course content to work-related and everyday tasks outside of class;
- supervisor post-course ratings of participants.

Meeting Participants' Goals- The first aspect of project product effectiveness was the collection on pre- and post-program surveys and from on-site interviews of data concerning the degree to which participants in the various programs were able to achieve their personal learning goals. During interviews, most learners expressed satisfaction with the content of courses. A frequently mentioned asset was the building of confidence that enabled participants to use the skills they were learning in order to pass certification exams or GED tests, improve current job task performance or prepare for quality procedures and technological equipment upgrades in the near future. The only exceptions came from ESL program participants at LWO and Oregon Cutting Systems who: 1.), felt threatened by program content they (beginning level learners) perceived to be too narrowly aligned with company-specific job tasks; and , 2.), thought they (intermediate level learners) should be receiving instruction more suited to their perceived higher proficiency levels. In asking learners to rate the program, the evaluator heard that the contents, instructors and schedules all earned "A" or "B" grades. Their reasons included liking the small groups because they got their individual questions answered, well-prepared instructors who seemed to really understand participants' jobs, convenience of meeting times and locations, and the relevance of materials to their job needs.

Participants reiterated many of the reasons they had given for wanting to take the course (see Context section of evaluation) as having been accomplished, when asked,"What can you do now that you couldn't do before taking this course?" (See Figure 1 for a detailed listing of learner responses. PLEASE NOTE: Many responses received on poorly duplicated copies of data collection forms were illegible and could not be included.) Of those learners completing data collection forms that asked if their program "had helped them reach or make progress toward any of [their] work-related or non-work related personal goals," 63% reported that it had. Additionally, when asked if they "would recommend participation in the program to a co-worker," 96% of the learners reported that they would.

Of those learners completing data collection forms that asked them to rate their program on polarized scales for the program's interest level, usefulness on the job, difficulty level, usefulness outside of work, and whether or not it had been what learners expected, the results as shown on Table 1 were obtained.

Table 1: Post-program participants' evaluation of course from analysis of responses to Item # 11 on Participant Post-Program Survey. (See Appendix A for copy of data collection instrument and site variations.) n = 151

	5	4	3	2	1	
Interesting	63%	29%	8%	0%	0%	**Boring**
Useful on the job	41%	21%	9%	9%	20%	**Useless on the job**
Too difficult	1%	7%	25%	28%	39%	**Too easy**
Useful outside of work	37%	37%	11%	6%	9%	**Useless outside of work**
Exactly what I expected	53%	27%	14%	3%	3%	**Not at all what I expected**

From Table 1, one can conclude that 100% of the participants found the programs to be extremely to moderately interesting. Sixty-two percent found them quite useful for their jobs. Only twenty-five percent of learners rated the programs as being at the appropriate level of difficulty, i.e., neither too difficult nor too easy, while 40 % found the programs to

be completely out of their range of abilities, rating it with a "5" or a "1." Eighty-five percent of learners also found program contents to be extremely to moderately useful outside of work. It is important to note that 53 % of learners reported that the program was exactly what they expected it would be, and another 41% felt that it was somewhat like what they expected it would be. Studies conducted on persisters and leavers in adult learning programs strongly support findings that adult learners tend to remain in programs that meet their expectations (Darkenwald, 1984). This reflects appropriate advertising of program content and goals and is worth noting for future program promotions, as well.

Paired sets of participants' pretest-posttest scores were available from Nabisco's math program, Warn Industries' shop math and computer programs,the Carpenters' Apprenticeship program, the CDL study skills program, Anodizing's math program, one ESL class at Leupold & Stevens, and one ESL class conducted at LWO. The greatest gain, 134.0%, was achieved in the shortest number of contact hours, 1 to 6, by participants in the Carpenters' Apprenticeship Math program. This may be due to the nature of the content, much of which focused on showing learners how to compute job task formulas, conversions, and measurements using a scientific calculator. Proper calculator use normally increases speed and accuracy of calculations.

The least amount of gain, 5.3%, was evidenced in data from the Beginning level ESL program at LWO. This may be due to the need for limited English proficient speakers to generally continue instruction for much longer than 21 hours in order to perceive measurable gains in beginning second language performance.

The results from Anodizing, Inc.'s Math program, 94.6% increase in 10 hours, also appear greatly in excess of the gains by other programs in a shorter amount of contact hours. This may be due to the content of the course, which primarily addressed fractions, decimals and percents. If workers were previously exposed to these math topics during formal schooling and had merely forgotten them from disuse, participation in a concentrated brush-up course such as this may have enabled them to recall and master under-learned math skills and account for the gain scores. Table 2 below displays the results for each program that collected this data.

Table 2: Pretest/ posttest averaged percent gains per program.

Program	Number of Participants Tested	Number of Instructional Contact Hours	Average % of Gain Pretest/Posttest
Warn Industries Shop Math	n=29	20 hrs.	+ 18.4%
Warn Industries Computer	n=41	16 hrs. (average)	+ 20.5%
Leupold &Stevens ESL	n=8	20 hrs.	+ 12.6%
Nabisco, Inc. Math	n=42	19.5 hrs.(average)	+ 26.0%
LWO ESL, Beginning Level	n=18	21 hrs.	+ 5.3%
Carpenters'Apprentice Math	n=307	1 to 6 hrs.(average)	+ 134.0%
CDL Study Skills	n=92	11 hrs.(average)	+ 35.4%
Anodizing, Inc. Math	n=72	10 hrs.	+ 94.6%

Based on participant goal statements and their close match with program instructional content and objectives, the pre-/posttest gains provide strong evidence that programs were effective in helping participants work toward or achieve their personal learning goals.

Figure 1

Participants' responses to "What can you do now that you couldn't do before taking this course?"

- Read a tape measure and know what I'm doing instead of just guessing
- Understand my work better on the job
- Work faster
- Use calculator to do fractions, decimals
- Can convert fractions and decimals
- Use the right formula for each situation
- Helped me brush up on calculator skills
- Comfortable doing right triangle computations
- Math!
- Be more secure and more patient
- Work a lot faster with percentages
- Figure angles and inches
- Multiply and divide fractions, decimals
- Cancel and invert
- Have a better grasp on decimals
- Got my GED
- Helps me work at home
- Improved my learning skills
- Understand better how I read and write
- Better basic skills
- Have more confidence in myself; I'm taking more classes at work and am not afraid to do things anymore
- Read and write much better English
- Feel good to myself; can get more educating now
- Present formal letters in typed format now
- Understand more about computers-- but I still don't like them!
- Found out I have an aptitude for computers
- Can use new methods on my job
- Computer language
- More comfortable with computers
- Showed me I have a lot to learn
- Learned the basics before complex problem
- Typing skills improved
- Know a little more than I did before
- How to get help when running applications
- Wordprocessing on spreadsheets
- Can do memos all by myself
- Basic navigation
- Doing graphs
- How to turn on computer and use files
- Can do my own projects
- Turning on the computer
- Format a disc
- Run a PC now fairly confidently
- Use WordPerfect
- Understand new programs easier
- Understand terminology used in field
- Not afraid of hurting programs anymore
- The vocabulary words
- Bought a computer since class; have taught myself more
- Don't know
- Less fear
- Can access information about parts
- Able to program work info
- Don't have to ask other people for help
- Don't feel afraid now when a team-leader helps me
- Can see where we can be more effective in our department
- Charts
- Sit at a PC and run it (somewhat)
- Further my education
- Ask supervisors questions
- Talk more to other workers
- A little algebra
- Percents

Instructor Anecdotal Records- To determine how and if learners were transferring new concepts and skills to applications on the job or outside of work, PPLC requested site instructors to report any instances of participants referencing situations in which they were using outside of class what they learned. An anecdotal recordkeeping form was supplied for this purpose. (See Appendix A for copy of data collection form used.) Information was gathered by only 3 instructors. Learner comments included references to: 1.), improved math ability on the job, such as being able to calculate more quickly and more accurately; 2.), certification tests passed for job positions and the CDL, as well as for the GED; 3.), quicker reading and processing of work orders; 4.), better speaking and writing skills; and, 5.), increased confidence and decisions to continue with more education.

Supervisor Ratings of Participants- Post-program participant ratings by supervisors were collected by six programs at four of the sites. Some used 5-point Likert scales developed by PPLC; other sites created their own forms. For this reason it is not possible to compare data across sites. Results and representative comments are listed below by program. (See Appendix A for a copy of the supervisor rating form.)

- Oregon Cutting Systems Computer program:
  Supervisors surveyed indicated that they were unaware their employees had taken a computer class. Only 15% reported any noticeable improvement in employee performance following the class. Another 30% commented that they did not feel computer training was relevant to their employees' job duties. (Returned survey n = 6.)

- Warn Industries Shop Math program:
  Supervisors surveyed indicated that they did not detect noticeable changes in either production or quality of work following program participation. Their responses showed that they felt their employees' abilities to cope with future changes and to solve problems cooperatively had improved somewhat. Specific changes noted in comments addressed individual employees' newly acquired abilities to do inventory transactions, cycle counting, problem solving, and accurate calculations on time cards and production jobs. (Returned survey n = 33.)

- Warn Industries Computer program:
  Supervisors surveyed indicated that they saw a slight improvement in production and quality of work, ability to cope with future changes and to solve problems cooperatively. Their comments referenced both positive and negative changes observed in individual employees following program participation. For example, in some employees they noticed more confidence in working with computers, increased contributions to the department, and greater facility for producing memos, meeting notices and minutes. In other employees they noticed increased frustration when dealing with computers and concern that those employees who are not currently required to work with computers will forget what they learned when the time eventually comes to apply their new skills. (Returned survey n = 19.)

- Leupold & Stevens ESL program:
  Supervisors rated participants on 4-point rating scales. Results indicated that they felt all of their employees who completed the program demonstrated some improvement in making suggestions. They indicated that 70% of their employees increased oral interaction with coworkers-- 10% significantly, 40% noticeably increased the number of times they speak up while performing job tasks, and 50% of their employees showed noticeable increases in self-confidence. (n for supervisors surveyed not reported.)

- Leupold & Stevens Blueprint Math program:
  Supervisors surveyed indicated that 77% of their employees demonstrated significantly greater cooperation and problem-solving abilities since particpating in the program. Their responses also indicated that 64% of their employees were noticeably applying skills learned to job tasks, and that they felt that all their employees would be better able to handle new procedures introduced into their departments in the future. Specific comments about individual employees noted enhanced quality monitoring and inspection skills plus increased self-confidence. (Returned survey n = 22.)

- Nabisco, Inc. Math and Skill Enhancement programs:
  Supervisors surveyed indicated that quantity of work produced by all their employees had increased, quality of work for 80% of their employees had

improved to a high level of accuracy, and attendance for 60% had greatly improved. They reported that 60% of their employees now need less supervision and the remaining 40% are now able to work independently. They also noted somewhat to greatly improved job attitudes in all their employees. Comments about individual employees gave examples like the following: "Doesn't ask the supervisor as many questions," "is more confident; knows how to use the calculator," "helps other employees with math," "interacts with others-- before he was a loner," and "knows his math skills." One supervisor was asked to comment on program impact on her department and responded, "[Employees] can confidently convert ingredients to decimal figures, cut ingredients in half for recipes, and understand process." (Returned survey n = 5.)

Additional data; Several programs also submitted indicators of program effectiveness gathered from comments by organizational managers at their sites. These included the following:

Warn Industries, Inc.- has hired program instructor/curriculum developer Scott Copeland full-time as corporate basic skills trainer.

Labor-sponsored Carpenter's Apprentice and CDL drivers programs- instruction will continue to be offered to members at each established learning center beyond the grant period.

Anodizing, Inc.- Has requested program to be continued; will pay instructor.

Leupold & Stevens- has cost of program continuation and instructor salary under budget consideration.

Nabisco, Inc.- has offered to pay instructor to continue program.

The willingness of these sponsoring partner organization(s) to pick up expenses for continuing the programs beyond the grant indicates that they perceived a cost benefit from participating in them.

Discussion

Limitations of this study- Three factors limited the ability of this study to draw definitive conclusions from the evaluation. The first was the inconsistency of data able to be collected across sites. Reduction of the originally budgeted time and financial resources allotted to project evaluation, 15% and 10% of time for two full-time NWREL principal staffpersons, or approximately 62 person days, to only 6 person days resulted in insufficient time available for thorough and complete investigation of aspects concerning each program delivery site this complex project.

The second limiting factor was the directive from the project director that all communication between project personnel and the external evaluator pass through his office. This was mandated during the last four months of project operations, following feedback to the project director after unsolicited contact of the evaluator by the project's college coordinators expressing their concern over the absence of contact and guidance from NWREL for extended periods of time and their data collection requirements. Denying the evaluator direct access to site coordinators and instructors immediately involved with the daily program activities, and forwarding reproduced copies of portions of original data, resulted in many queries on details and issues of clarification that had to be left unanswered. It also raised questions as to why original data, as requested, was not sent, and as to the nature of the selection process imposed on that data forwarded by NWREL to the evaluator.

The third limiting factor was the difficulty experienced by the evaluator in collecting and obtaining some of the requested data from the program providers in a timely fashion and in the formats required for inclusion in the evaluation. Unfortunately, the absence of some key program measures that were requested throughout the project severely limits the evaluator's abitity to draw conclusions about the overall effectiveness of this demonstration.

Summary of Results- The following statements provide summary and discussion of key findings from the evaluation of project context, input, process, and product.

Context - The extent to which the goals and philosophy of the project were shared by key project personnel and learners was found to be as follows:

Areas of consensus: There was a good deal of consensus about program goals among project directors, coordinators, managers, and the program developers. All highlighted the importance of the instruction as a means for mastery of basic skills and their applications to job tasks and requirements. The use of these skills to foster workers' abilities to enhance career opportunities and job performance was mentioned by all. Participants also commented on their desire to improve these skills and on the programs' relevance to accomplishing their personal goals.

Areas of divergence: The main areas of divergence were evidenced during interviews in the responses of those instructors not directly involved with curriculum development, namely their reluctance to commit to organizational goals for totally job-relevant programs. They all commented on their desire to make the programs more life-skill oriented in content, rather than adhering to the goal for providing the job-specific workplace programs agreed to by the consortium and partnering organizations. There appeared to a lack of understanding among these instructors of the nature of the overall purpose and functional context design of workplace literacy programs. Such mixed philosophies between materials developers and deliverers are in direct conflict with the consortium's goals for the project.

These observations should not be taken to mean that instructors were not doing their jobs. Participants expressed indications that they perceived themselves to be learning skills they could apply in the workplace and were having their needs met. Most learners were satisfied with their experiences, sometimes because of instructor personal attention.

It may be, however, that the informal and variable types of pre-service training provided for instructors was insufficient to guarantee their internalizing program goals. With such brief and erratic training, it is likely that instructors will maintain whatever learner goals they have used previously. With development of instructor training materials carefully structured to include guidance, modeling, and post-training assessment of delivery skills, this problem might have been alleviated.

Additionally, the two college administrators' remarks indicated a preference for a more generic approach to provision of basic skills to workers. They appeared to see the project only as a source of monies for current budget commitments, not as a means for developing longterm relationships as service providers for local businesses/ unions. They

did not make any mention of using the grant period to extend college services nor view the project as a means for generating new sources of revenue or larger student bases. Depending on their extent of involvement with project decisions concerning the extent of actual development of materials and implementation of courses, this also presented a potential conflict in program philosophy and direction.

Input- The availability to the project of resources during development and implementation and to what extent they were effectively used was found to be as follows:

Strengths and Weaknesses - The curriculum materials developed for the program contained numerous job task and certification requirement examples of skill applications, enabling learners to practice skills in ways they would use for the workplace. Resources for program development appeared adequate financially for instructional delivery, but unrealistic materials development time lines impacted on the stress level of the inexperienced developers. Many of the instructor/developers expressed frustration with the unanticipated large amounts of time necessary for them to commit to conducting literacy task analyses and preparing functionally contextual curriculum materials from the results. Had the instructor/developers been hired under the grant as full-time employees with benefits, they might have been better able to accommodate and rationalize the number of hours they needed to invest in curriculum development. Instead, they were paid only for instructional hours, at part-time adult educator hourly rates.

All three college coordinators also commented on learning how to budget their time working on the project appropriately, as well. All felt that the amount of time required for conducting essential liaison activities with business/labor partners on a daily basis was far in excess of their original expectations. One remarked on learning from the project how very unpredictable and volatile the culture of the workplace is, subject to sudden and dramatic changes as a result of internal organizational politics or the economy. Keeping accessibility and visibility high requires a great deal of frequency and regularity of physical presence. The other two both commented on the necessity for allocating a minimum of several full days per week to monitoring and assisting with program activities at sites.

Content of most of the program curricula was well designed, including the modeling of thought processes. The resulting original materials created for the project contain strong

lessons that offer participants opportunities to develop cognitive awareness of their thinking strategies during applications of basic skills to job tasks and certification requirements, and that enhance the probability of continued application of those skills learned. The inclusion of pre- and post-tests or assessments for most curricula provided strong evidence that participants made progress in mastering the content of the programs.

The content of several of the curricula included a number of previously published excerpts from other commercially available sources. Using others' words and ideas anonymously, without first obtaining written permission from the copyright holders and authors, is a major flaw in the curriculum design and development of these particular programs. Inclusion in subsequent publishing or dissemination of project curricula could also lead to legal ramifications for the project administrators.

Instructor and program developer qualifications and previous experience were rich and highly professional; they provided a definite enhancement to the program overall. Criteria might be derived from a composite profile of the qualifications and background of these key personnel for use as hiring guidelines for project or program institutionalization or replication.

Instructor training sessions proved to be inadequate; they did not provide the total support system that the program needed for full acceptance by the instructors, congruence of purpose and mastery of techniques among the developers. The brief duration and one-time deliveries of the two training sessions addressing the complex craft of creating functional context workplace literacy curricula did not satisfactorily meet the needs of project personnel for preparing to become curriculum developers and workplace instructors, for ongoing support, or for dealing with the issue of late hires due to normally anticipated rates of turnover among part-time staff.

Definitions of roles and duties was mentioned by all. The project directors from NWREL commented on the federally mandated revisions to the original grant structure that changed their role from that of project evaluators to directors. Their initial mind-sets for structuring their functions seemed firmly cast. This was evidenced in their reluctance to assume a leadership, support role with the consortium, and in their controlling attitude toward data collection, i.e.,in establishing themselves as the intermediary agency through which all data must flow from the sites to the evaluator. It was also reflected in the lab-

generated data collection instruments that sites often substituted for PPLC-developed tools. These were computer-analysis, outcome-oriented instruments that omitted many of the items requested by the external evaluator.

College coordinators remarked that following the federally mandated revisions to the original grant proposal, no meeting was ever held with all consortium members to define adjusted roles and duties. This resulted in frustration, lack of cohesions, and occasional misunderstandings between the colleges and the lab.

College coordinators and project directors all mentioned that being administrators without control of the project budget, or even of program specific portions of it, caused logistical problems resulting in time lags in receiving up-to-date balance sheets and in knowledge of what monies could or could not be expended on immediate project needs.

Instructor/curriculum developers commented frequently on their lack of prior knowledge as to toe extent of their duties in this previously unknown specified instructional area and how much time and effort would be involved in developing curricula. Most thought that they had been hired as part-time hourly adult education instructors and that the curricula would be available off-the-shelf from commercial publishers. Experience with developing an occasional student exercise did not prepare them for the intensiveness and complexity necessary for creating entire courses related to job performance or requirements.

Process- The extent to which program development and observed instruction were congruent with program goals and research on instructional effectiveness follows:

Areas of convergence and divergence: Learner engaged time was quite high and learners spent 85-92% of time in the classroom actually participating in skill building activities. Both instructors and participants appeared motivated to take full benefit of instruction time and took pride in the efforts made.

The quality of instruction was good overall. Each instructor that was observed appeared to be engaged in "reciprocal learning" with the learners and displayed a caring attitude and willingness to assist learners achieve their goals. Evidence varied from

instructor to instructor in ability to demonstrate the thinking processes necessary for applications of workplace basic skills to be taught effectively.

The project well exceeded its goal for providing services to approximately 300 participants and enrolled a total of 776 workers. This is a strong indication that overall, recruitment and everyday relationships with partnering organizations were operating well. The programs that reported dwindling attendance were those addressing English as a Second Language. This may have been due to the generic ESL content of courses delivered by instructors not involved in creating functionally contextual workplace curricula or to changes in perceived employer program support external to instruction.

Product- The impact of the program was assessed with a combination of indicators, including comments from learners and instructors, and supervisor ratings. A summary of the results follows.

Business and industry organizations normally evaluate training on four levels. Because workplace literacy programs are directly related to assisting workers attain career goals by meeting job requirements and improving performance on job tasks, it is appropriate to measure program outcomes using this yardstick:

Level I- does the proposed program match with an identified organizational need? In this case, the project programs were desired by each of the partnering organizations to enable their members to function better through improved workplace applications basic skills. The grant application shows that specific job tasks and special needs of each cooperating organization were identified and targeted, (Table 2). The job tasks and requirements were carefully selected and analyzed through literacy task analyses, from which the curricula were then developed.

Level II- do the participants selected for training master the content of the training program? Impressive gains from pre-/posttest scores, instructor anecdotal reports, and numerous post-program statements by participants compared to pre-program goal statements, provide strong evidence that participants mastered the content of programs for which this data was collected.

Level III- do those participants who master training demonstrate improved job performance in areas identified as critical to show positive transfer of learning? Post-program ratings of participants by supervisors indicated that in only half of the programs did supervisors notice significant changes in employee performance. Of those that did see improvements, they were able to identify specific observable, measurable behaviors that clearly demonstrated positive transfer of course content to job tasks.

Level IV - does impact on performance lead to demonstrable cost benefits, i.e., money saved or generated, by the positive changes in employee behavior? In this case, the organizations indicating positive program impact did not report any cross-referencing of individual productivity or behavioral indicators with performance appraisals, the supervisor ratings and instructional objectives of the programs. No data exists, therefore, for determining the possible cost-benefits derived from employee participation in the programs. The actions under consideration, or already taken, by some of the partnering business/labor organizations to continue programs beyond the grant period indicates satisfaction with services as benefitting the organization.

Conclusions and Recommendations

Based on the results of this evaluation, the following conclusions and recommendations concerning stated grant goals are offered.

There is strong evidence showing:

- learner increases in specific job-related skills and in basic math, reading, writing, and English language skills;
- learner enhancement of problem-solving skills, promotability, employment prospects and increased self-confidence;
- educator enhanced knowledge of skills needed by local businesses and industries; and
- sharing of resources and expertise among consortium members.

There is only a moderate amount of evidence indicating:

- improved employee performance and productivity on targeted jobs and ability to adapt to changing workplaces;
- educator increased knowledge and expertise in the field of workplace literacy; and
- removal of [perceived] barriers to instruction for target groups, e.g., cost, relevance, logistics, lack of confidence, childcare, transportation, and training materials.

Recommendations:

1. Eliminate subjectivity and vagueness of supervisor rating instruments; work with supervisors on an individual site basis to identify specific observable, measurable performance behaviors that are related to program instructional objectives and that can be used as concrete indicators of transfer of learning to job performance.

2. Strengthen project training by lengthening initial how-to sessions for learning functional context workplace curriculum development techniques and by providing inservice as well as preservice training to all instructors and curriculum developers. Develop pre-delivery training sessions for instructors not involved in creating curricula and provide them with instructor guidelines for each unit of instruction.

3. Determine whether or not each of these perceived barriers actually exists, prior to budgeting resources and energy for its removal, i.e. childcare, transportation, etc. Collect data, first to establish existence of each barrier and then to determine the extent of the project's ability to eliminate it.

There is little or no evidence showing:

- learner access to vocational and educational counseling services;
- apprenticeships, certifications, promotions for a population of at least 300 participants;
- expanded Adult Basic Education delivery and outreach by community colleges;
- establishment of ongoing partnerships between industry and education;
- establishment of a regional network of workplace literacy experts and spokespersons;
- development of methodology for assessing workplace literacy needs;
- provision of a network infrastructure for dissemination of project results; and
- launching of a Northwest Workplace Literacy Campaign.

Recommendations:

1. .If individual counseling is a part of the program, maintain records to determine need for these services, nature of services and resources, frequency of use, and impact on participants' attainment of program goals.

2. If apprenticeships, certifications, and promotions are to be used as measures of program success, collect data that indicates the number of

participants entering the program who are seeking these outcomes and the number who achieve them. Determine whether there are any other variables that might impact on attaining these outcomes and control for them before claiming program responsibility for their attainment or lack of attainment by participants.

3. Obtain commitment of college administrators to permanent support for program development and program staff positions. Determine whether or not amendments or emendments to existing institutional financial and organizational structures need to be made to facilitate this ongoing support. Evaluate institutional philosophy, longrange goals and motives for participation.

4. Obtain commitment of business/labor organizations to permanent support for program development and delivery. Determine organizational critical needs and establish advisory panel at each site to actively work with program providers. Work to obtain buy-in at several levels: upper management, training and education, supervision; include comparable levels of union representatives.

5. Research available methodology for assessing workplace literacy needs and the effectiveness of various techniques and procedures. Create additional methods and variations based on situational needs that directly link program provision to identified workplace performance needs and upcoming changes. Anticipate more than one appropriate method.

Appendix

Data Collection Instruments

I. PPLC Evaluation Forms

For Administrative use only
Entry date:_____

PARTICIPANT PRE-TRAINING SURVEY

Exit Date:_____
Occ. Code:_____

I. Personal Information

Name _____
(Last) (First) (Middle Initial)

Current Address:_____
(Street and Number)

_____ _____
(City) (State) (Zip Code) (County)

Telephone number:_____ Birthdate:_____
(Month) (Day) (Year)

1. What is your age group?

____ 16-18yrs. ____ 19-25yrs. ____ 26-35yrs. ____ 36-50yrs. ____ 51-65yrs. ____ 65+yrs.

2. What is your ethnic group?

1.__White 2.__Black 3.__Indian 4.__Hispanic 5.__Other

3. What is your gender? 1.__Male 2.__Female

II. Employment Information:

4. Are you now employed? 1.__Yes 2.__No

5. What company do you work for? _____

6. How long have you worked for this company?

____ Less than 1 yr. ____ 1-2 yrs. ____ 3-5 yrs. ____ 6-10 yrs. ____ more than 10 yrs.

7. What is your job title? _____

8. How long have you worked in this job title? _____
(beginning date)

9. What other jobs have you held with this company?

1. _____ From: _____ To: _____
2. _____ From: _____ To: _____
3. _____ From: _____ To: _____

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10. What other kinds of jobs have you held?

JOB TITLE		DATES	COMPANY
_____	_____	_____	
_____	_____	_____	
_____	_____	_____	

11. What kinds of machines, equipment, tools have you used on the job?

1. _____ 4. _____
2. _____ 5. _____
3. _____ 6. _____

III. Training & Education Information:

12. Have you served in the military? 1.___Yes 2.___No

13. What kinds of job training have you had? (Please list below)

1._____
2._____
3._____
4._____

14. What is the last grade you completed in school?

below 8th	8th	9th	10th	11th	12th
___	___	___	___	___	___

GED	1 yr. college	more than 1 yr. college
___	___	___

15. Have you earned any college degrees?

1.___Yes 2.___No 3. ___Associates 4.___Bachelors 5.___Masters 6.___Other

16. Which of the following are <u>your</u> reasons for attending this training? (You may mark up to three answers.)

___a. To improve my job performance.
___b. To qualify for future job postings.
___c. To gain experience with test taking skills.
___d. To further my education.
___e. To meet personal goals.
___f. To find out more about this training.
___g. To become more active in company training programs.
___h. Other_____

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17. Which way do you BEST like to get information about something you need to know more about? (Please mark only one answer.)

1. ___Read about it.
2. ___Listen to presentations or talks about it.
3. ___Have someone show and tell you about it.
4. ___Other (describe) _____

18. Did you choose to take this training? 1.___Yes 2.___No

19. What do you expect to get from this training? _____

_____

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PARTICIPANT POST-PROGRAM SURVEY

Name _____ **Date** _____

Course title _____

Course location _____

Directions: Please answer each question below. The information you give will be used to evaluate and help improve the course materials you have used.

I. Background information:

1. How long have you worked at this company ? _____
2. How long have you done this kind of work ? _____
3. How long have you worked in your present position? _____
4. What is your job title? _____
5. If you are in a training program, how long have you been in the program? _____ For what job position are you training?_____
6. What is your age? _____
7. What is your sex? _____ _____
   Male Female

II. Course Information:

8. What can you do now that you couldn't do before taking this course?

_____

_____

_____

9. How many classes have you attended so far ?

_____classes.

10. Has this course helped you meet or work toward any of your personal goals? _____ _____
    Yes No

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10a.(If you checked yes for #10, please answer the next part of the question)

In what way? _____

_____

11. Circle one number in each row across to show how you would rate each item.

How would you rate this program?

Very interesting to me	5	4	3	2	1	Boring to me
Very useful to me on the job	5	4	3	2	1	Totally useless to me on the job
Much too difficult for me	5	4	3	2	1	Much too easy for me
Very useful to me outside of work	5	4	3	2	1	Totally useless to me outside of work
Exactly what I expected	5	4	3	2	1	Not at all what I expected

How would you rate the materials?

Hard to learn and confusing for me	5	4	3	2	1	Easy to learn and simple for me

12. Would you recommend this course to a co-worker or friend?

_____ Yes _____ No

Why or why not? _____

_____

12. If you could change anything about this program, what would it be?

_____

_____

Thank you for taking time to help evaluate this course. Your answers will be very useful in trying to make it better.

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Supervisor's Signature

Today's Date

SUPERVISOR RATING OF POST-PROGRAM PARTICIPANTS

Name of employee you are rating:

Badge # of employee you are rating

In your opinion, now that the Skill Builders course has been completed, how would you rate its effects on this participant that you supervise? Circle the number that shows how you feel.

JOB ATTITUDE:

5	4	3	2	1
Greatly improved	Somewhat improved	The same	Somewhat worse	Much worse

Please give an example:_____

QUANTITY OF WORK:
(Instructional hours missed not included)

5	**4**	**3**	**2**	**1**
Increased above 100%	Increased some	Stayed the same	Decreased some	Decreased a lot

QUALITY OF WORK:

5	**4**	**3**	**2**	**1**
Very high accuracy	High accuracy	Meets requirements	Some errors	Many errors

ATTENDANCE: (Other than instructional hours)

5	**4**	**3**	**2**	**1**
Greatly improved	Somewhat improved	Stayed the same	Somewhat worse	Much worse

JOB KNOWLEDGE:

5	**4**	**3**	**2**	**1**
Works independently	Needs less supervision than before	Stayed the same	Needs more supervision than before	Needs constant supervision

- Has the employee asked about other job positions or announcements since participating? ____
  If yes, what? _____
- With all other things being equal, on the next status report would you recommend a pay increase for this employee after his/her participation in Skill Builders courses? _____
- With all other things being equal, would you recommend this employee for a job advancement after participating in the Skill Builders program? _____

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SUPERVISORS' EVALUATION OF PROGRAM EFFECTS ON THEIR DEPARTMENTS

Supervisor"s Name: _____

Today's Date: _____

- How many employees in your department participated in a Skill Builders program? ____

- In your opinion, what effect did the participation of employees from your department have on each of the areas below? Circle the answer in each category that shows how you feel:

PRODUCTION:

5	4	3	2	1
Greatly increased	Somewhat increased	Stayed the same	Somewhat decreased	Greatly decreased

QUALITY:

5	4	3	2	1
Greatly improved	Somewhat improved	Stayed the same	A few more errors	Many more errors

COMPANY FUTURE PLANS:

Having gone through the program, when more computerized technical equipment comes to your department, do you think your employees will be able to handle it

Better **The Same** **Worse**

- Of the empoyees in your department who participated in the program, do you notice any team-building as a result (greater cooperation or problem solving among your employees)?

5	4	3	2	1
A lot	Some	Same as before	Little	None

- Since your employees participated in the program, do you feel that your job as a supervisor has become:

5	4	3	2	1
Much easier	Somewhat easier	Same as before	Somewhat more difficult	Much more difficult

Give an example:_____

- If the company plans to continue to have employees participate in Skill Builders programs in the future, what would you recommend to improve the way the program is run?

_____

- Based on the effect that the program has had on the employees from your department who participated, would you recommend additional employees to the program? ____ Why or why not?

_____

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II. Site-Generated Evaluation Forms

Questionnaire For Employees that have taken the Computer Basics Class...

Name:_____

Team:_____

(the next page has an evaluation that does not require you give your name)

Please answer the following questions...

1. Since taking the class, are you more comfortable around computers? Explain why or why not.

2. Since taking the class, are you more familiar with the words and terms used in referring to computers? Explain why or why not.

3. Has the class helped you learn to interact with computers in a more effective way?

If so, How?

4. Did the class help you understand how computers can be used to make you a better worker/team member? Explain.

5. What can you do now as a result of having been in the class?

6. What things should be changed to make the class better?

Please return this questionnaire and the Course Evaluation to Toni M. in HR-Training as soon as possible.

Evaluation of Computer Basics Course

To:_____

Please help us follow-up on the effectiveness of this training course. Answer each question as best you can. If a question does not apply to you, just leave it blank.

---

1. Have you been able *to use* any of the knowledge or skills you learned in this course?

1.	2.	3.	4.
I've used it a lot	I've used it a little	I haven't had a chance to use it	I won't be able to use it

Comments:_____

2. Have you taken any other computer classes since taking this course?

Yes? No?

If yes, what course(s):_____

If you have taken other courses, did this course help you in another course?

1.	2.	3.	4.
It helped me a lot	It helped me a little	It didn't really help	It left me confused

Comments:_____

3. Do you plan to take other courses in computers at OCS?

1.	2.	3.	4.
I'm enrolling in January	I plan to take one soon	I plan to take one eventually	I may not take one

Comments:_____

Did being in the Computer Basics class encourage you to plan to take more classes?

Yes? No? Explain:_____

4. May we contact your supervisor to ask them a few questions about how the class may have affected your performance on the job?

Okay? **Not Okay?**

Please Return this Survey to Lynn Cox in the Training office as soon as possible, Thank you.

SAMPLE

LEADER'S EVALUATION OF TRAINING EFFECTS ON THEIR TEAMS

Leader's Name: _____
Today's Date: _____
Course Name: _____

Below you will find an evaluation matrix. Now that the first year's courses have been completed, how would you rate their effects on the participants that you lead? Use key below:

NAME	PRODUCT-ION	QUALITY	FUTURE PLANS	CO-OPERATION AND PROBLEM SOLVING
[redacted]	5 4 3 2 1	5 4 3 2 1	3 2 1	5 4 3 2 1
[redacted]	5 4 3 2 1	5 4 3 2 1	3 2 1	5 4 3 2 1
[redacted]	5 4 3 2 1	5 4 3 2 1	3 2 1	5 4 3 2 1
[redacted]	5 4 3 2 1	5 4 3 2 1	3 2 1	5 4 3 2 1
	5 4 3 2 1	5 4 3 2 1	3 2 1	5 4 3 2 1
	5 4 3 2 1	5 4 3 2 1	3 2 1	5 4 3 2 1
	5 4 3 2 1	5 4 3 2 1	3 2 1	5 4 3 2 1

KEY:
Production:
5 = Greatly Increased 4 = Somewhat Increased 3 = Stayed the Same
2 = Somewhat Decreased 1 = Greatly Decreased

Quality:
5 = Greatly Improved 4 = Somewhat Improved 3= Stayed the Same
2 = A few more errors 1 = Many more errors

Future Plans:
After completing the program, when new technical equipment or training comes to your department, do you think your employees will be able to handle it
3 = Better 2 = The Same 1 = Worse

Co-operation or Problem Solving:
5 = A Lot 4 = Some 3 = Same amount as before program
2 = Little 1 = None

Overall:
Since your employees participated in the program, do you feel your job as a leader has become
5 = Much Easier 4 = Somewhat Easier 3 = Same as Before
2 = Somewhat More Difficult 1 = Much More Difficult

BEST COPY AVAILABLE

Please give an example: _____

_____

_____

Return to Jean Gillespie by December 12. Call Toni (457) or Scott (225) with questions.

Course Evaluation

You do not need to write your name on this form.

****

How long have you worked at this company?_____

How long have you done this type of work?_____

What is your job title or position?_____

What is your sex? M or F (circle one).

What is your age? _____ What is your Race?_____

****

Your Answers are Kept Confidential

***

Only write your Name on this if want to be contacted

What type of problems can you solve that you couldn't before taking the class?

_____

_____

Do you think the skills you learned in this class will help you in your job? Why, or why not? How?

_____

_____

Do you think the course has (or will) help you meet any of your personal goals? Why, or why not? How

_____

_____

Would you recommend the course to a fellow-employee or friend? Why or why not?

_____

_____

Were the materials and workbooks helpful? What was good or bad about the materials used in this course?

_____

_____

If you could change the course in any way, what would you suggest we do to make it a better class?

_____

_____

Circle the answer that best applies...

	Circle one:		
The course was too hard	agree	not sure	disagree
The course will help me on the job	agree	not sure	disagree
The course will help me outside of work	agree	not sure	disagree
The course was confusing at times	agree	not sure	disagree
The teacher made it easy for me to learn	agree	not sure	disagree
I would like another class taught this way	agree	not sure	disagree

****

Use the back of this form if you wish to make further comments or suggestions.

Thank you for your help. You will help us make this a better course.

BEST COPY AVAILABLE

REGISTRATION FORM

I. Personal Information

Name_____
(Last) (First)

Current Address:_____
(Number and Street)

(City) (State) (zip)

Telephone Number:___ Birthdate:___

1. What is your age group?

16-18yrs. 19-25yrs. 26-36yrs. X 36-50yrs. 51-65yrs. 65-yrs.

2. What is your ethnic group?

1._X_White 2.___Black 3.___Indian 4.___Hispanic 5.___Other

3. What is your gender? 1.___Male 2._X_Female

4. Circle: (Single) Married Head of Household

II. Employment Information:

Extension No.#_____ Mailbox_____

5. How long have you worked for this company?

less than 1 year 1-2yrs. 3-5yrs. 6-10 yrs. X more than 10 years

6. What is your job title? Machine Operator

7. How long have you worked in this job title? May 1978
(beginning date)

III. Training and Education Information:

8. What is the last grade you complete in school?

below 8 8 9 10 11 X 12 GED

1 yr college more than 1 yr. college

Have you earned any college degrees?
1.___Yes 2._X_No 3.___Associates 4.___Bachelors 5.___Masters

9. Which of the following are <u>your</u> reasons for attending this class? (You may mark up to three answers.)

____ a. To improve my job performance.
____ b. To qualify for future job postings.
____ c. To further my education.
_x_ d. To meet personal goals.
____ e. To find out more about this training.
____ f. To become more active in company training programs
____ g. Other_____

10. Which way do you BEST like to get information about something you need to know more about? (Please mark only one answer.)

1. x Read about it.
2. _____Listen to presentations or talks about it.
3. _____Have someone show and tell you about it.
4. _____Other (Describe)

_____

11. Did you <u>choose</u> to take this class? 1. x Yes 2. ____No

12. What do you expect to get from this class?

To learn and advance in a skill that needs improvement.

_____

_____

WPL 1/15/91

(5)

OCS TRAINING CRITIQUE FORM

PURPOSE OF CRITIQUE: Continual improvement of training classes and processes. Thanks for your assistance.

CLASS TITLE Computer BASIC DATE 5-15-91
INSTRUCTOR (S) Scott Lowe

1) Were your overall expectations met for this class?

1 (not at all) 2 (very little) 3 (somewhat) 4 (reasonably well) 5 (definitely) 6 (beyond expectations)

If you did not rate a 5 or 6, what could have been done differently to achieve a 5 or 6 rating?

2) Please rate the overall appropriateness and quality of the training materials (or manual) you received for this class.

1 (not at all) 2 (very little) 3 (somewhat) 4 (reasonably appropriate) 5 (definitely) 6 (beyond expectations)

If you did not rate a 5 or 6, what could have been done differently to achieve a 5 or 6 rating?

3) Were you contacted regarding this class in a timely manner?

1 (not at all) 2 (very little) 3 (somewhat) 4 (reasonably well) 5 (definitely) 6 (beyond expectations)

If you did not rate a 5 or 6, what could have been done differently to achieve a 5 or 6 rating?

4) How appropriate was the day & time of this class(es)?

1 (not at all) 2 (very little) 3 (somewhat) 4 (reasonably well) 5 (definitely) 6 (beyond expectations)

Comments:

5) How would you rate the importance of this subject to your job?

1 (not at all) 2 (very little) 3 (somewhat) 4 (reasonably impt.) 5 (definitely impt.) 6 (extremely impt.)

Comments: It could have been longer - more than three Saturdays

SEE BACK PLEASE

CARPENTER TRAINING CENTER
Monday-Wednesday Math Lab

POST-PROGRAM PARTICIPANT
Survey Sheet

Class Information:

1. What can you do now that you couldn't do before taking this class?

_____

_____

_____

2. How many classes have you attended so far? _____ Classes

3. Has this class helped you meet or work toward any of your personal goals?

_____ Yes _____ No Why or why not? _____

4. Circle one number in each row across to show how you would rate each item.

How would you rate this program?						
Very interesting to me	5	4	3	2	1	Boring to me
Very useful to me on the job	5	4	3	2	1	Totally useless to me on the job
Very useful to me outside work	5	4	3	2	1	Totally useless to me outside work
Exactly what I expected	5	4	3	2	1	Not at all what I expected
How would you rate the materials?						
Easy to learn and simple for me	5	4	3	2	1	Hard to learn and confusing for me

5. Would you recommend this course to a co-worker or friend? _____ Yes _____ No

Why or why not? _____

_____

6. If you could change anything about this program, what would it be? _____

_____

_____

hank you for taking time to help evaluate this course. Your answers will be very useful in trying to make it better.

Skill Builders SC/MT 10/14/91

Anodizing, Inc.

Math Classes
Learner Evaluation

Rate each item by circling one number in each row.

1. This class has been						
very interesting	5	4	3	2	1	very boring
2. This class was						
very hard	5	4	3	2	1	very easy
3. On the job this class helped me						
to do more accurate work	5	4	3	2	1	not at all
4. The instructors were						
interesting	5	4	3	2	1	boring
5. I understood what I was supposed to learn						
most of the time	5	4	3	2	1	rarely
6. Sufficient practice exercises were included						
too many	5	4	3	2	1	too few
7. I received sufficient feedback on my practice exercises						
always	5	4	3	2	1	rarely
8. The reviews measured my performance on the lessons						
always	5	4	3	2	1	never

9. I received sufficient feedback on my reviews						
always	5	4	3	2	1	never
10. After being in this class, I would						
like to have more training like this	5	4	3	2	1	no more training like this
11. This class has been						
very useful to me on the job	5	4	3	2	1	total useless to me on the job

12. What can you do now that you could not do before taking this class?

13. Has this class helped you meet or work toward any of your personal goals? If so, how?

14. Would you recommend this class to a co-worker? Why or why not?

15. What did you like best about this class? Least?

PLEASE RETURN THIS EVALUATION TO JOHN FOSTER BY AUGUST 30, 1991.
THANK YOU FOR YOUR INPUT!

Anodizing, Inc.

Math Skills Class

SUPERVISOR EVALUATION

Participant_____ Job Title_____

What effect did the participation in the math class have on your employee? Circle the number that applies for each item.

1. The trainee indicated that the course was well designed and helpful.						
Very well done	5	4	3	2	1	poor
2. He/she mastered the material he/she was taught.						
definitely	5	4	3	2	1	not at all
3. He/she has greater cooperation and/or problem solving ability since the class.						
Yes	5	4	3	2	1	I see no difference
4. The trainee applies the skills learned in class on the job.						
Yes	5	4	3	2	1	I see no difference
5. How do you think the employee will be able to handle new procedures introduced into your department?						
Much better	5	4	3	2	1	Much worse

6. What was the most positive effect of this course on the employee?

_____

_____

_____

_____

THANK YOU FOR YOUR INPUT!

PLEASE RETURN THIS EVALUATION TO JOHN FOSTER BY AUGUST 30, 1991.

Skill Builders MT rev. 8/2291

Leupold & Stevens, Inc.

Math Classes
Learner Evaluation

Rate each item by circling one number in each row.

1.	This class has been					
very interesting	5	4	3	2	1	very boring
2.	This class was					
very hard	5	4	3	2	1	very easy
3.	On the job this class helped me					
to do more accurate work	5	4	3	2	1	not at all
4.	The instructor was					
interesting	5	4	3	2	1	boring
5.	I understood what I was supposed to learn					
most of the time	5	4	3	2	1	rarely
6.	The materials were directly related to the objective					
always	5	4	3	2	1	rarely
7.	Sufficient practice exercises were included					
too many	5	4	3	2	1	too few
8.	I received sufficient feedback on my practice exercises					
always	5	4	3	2	1	rarely
9.	The tests measured my performance on the objectives					
always	5	4	3	2	1	never

Skill Builders MT Rev 6/13/91

10. I received sufficient feedback on my test results.

always	5	4	3	2	1	never

11. After being in this class, I would

like to have more training like this	5	4	3	2	1	no more training like this

13. What can you do now that you could not do before taking this class?

14. Has this course helped you meet or work toward any of your personal goals? If so, how?

15. Would you recommend this course to a co-worker? Why or why not?

16. What did you like best about this course? Least?

PLEASE RETURN THIS EVALUATION TO ANTHIA SWANSON BY JUNE 20, 1991.

THANK YOU FOR YOUR INPUT!

Leupold & Stevens, Inc.

Math Skills Class

SUPERVISOR EVALUATION

Participant_____ Job Title_____

What effect did the participation in the math class have on your employee? Circle the number that applies for each item.

1.	The trainee indicated that the course was well designed and helpful.					
Very well done	5	4	3	2	1	poor
2.	He/she mastered the material he/she was taught.					
definitely	5	4	3	2	1	not at all
3.	He/she has greater cooperation and/or problem solving ability since the class.					
Yes	5	4	3	2	1	I see no difference
4.	The trainee applies the skills learned in class on the job.					
Yes	5	4	3	2	1	I see no difference
5.	How do you think the employee will be able to handle new procedures introduced into your department?					
Much better	5	4	3	2	1	Much worse

6. What was the most positive effect of this course on the employee?

_____

_____

_____

_____

THANK YOU FOR YOUR INPUT!

PLEASE RETURN THIS EVALUATION TO ANTHIA SWANSON BY JUNE 20, 1991.

Skill Builders MT rev. 6/13/91

L+S Beginners ESL Supervisor Evaluation Form

To: Sample Copy Date: November, 28, 1990

From: D'Anne Burwell and Linda Clarke, Instructors Subject: English Class

The 8-week English in the Workplace course is nearly over. It should be recognized that language improvement in a short period of time is more difficult to observe than manual skill development; however, your input would be greatly appreciated. There has been an emphasis in the class on improving pronunciation, speaking up and making suggestions. We would like to know if _____ is using what s/he has learned. Please rate this employee on the scale from 1 to 4, with 1 representing minor improvement and 4 representing major improvement. Again, we value your input as part of our evaluation.

	IMPROVEMENT			
	minor			major
1. Increase in making suggestions	1	2	3	4
2. Increase in interaction with others	1	2	3	4
3. Increase in speaking up	1	2	3	4
4. Increase in sense of confidence	1	2	3	4

Please add any additional comments. Your feedback is important.

Remember to keep in mind that these employees value your encouragement. They are making the extra effort, after work, to learn more English. They greatly appreciate your interest and support!

Please return this to Barbara in HR no later than Monday, December 10. Thank you.

L+S advanced ESL

EWP PARTICIPANT EVALUATION

CONTENT	Liked	OK	Did Not Like
Work related theme in general	___	___	___
Performance Review Preparation			
Personal work related issues	___	___	___
APPROACH			
Large group discussion	___	___	___
Small group problem solving	___	___	___
Pronunciation drill in large group	___	___	___
	___	___	___
Mechanics			
Length of term - 8 weeks	___	___	___
Length of class period - 1½ hours per day	___	___	___
Number of days per week - 2 days	___	___	___
Time of class - after work	___	___	___
Location	___	___	___

SKILL DEVELOPMENT	Level of Improvement Great	Some	None
Conversation			
Talk with	___	___	___
Talk with co-workers	___	___	___
Speaking up in group meetings	___	___	___
Conversations with friends	___	___	___
Listening			
Instructions from	___	___	___
Corrections from or co-workers	___	___	___
Reading			
Work related materials	___	___	___
Non-work related materials - letters, newspapers, memos, signs, etc.	___	___	___
Texts for language practice	___	___	___
Writing			
Work related memos or forms	___	___	___
Filling out forms other than for work	___	___	___
Personal writing letters, lists, notes	___	___	___
Pronunciation	___	___	___

TEACHER STYLE	GOOD	OK	NEEDS IMPROVEMENT
Consistent	___	___	___
Organized	___	___	___
Listened to needs of class	___	___	___
Provided corrections	___	___	___
Flexible	___	___	___
Helpful	___	___	___
Provided enough variety of materials so that class was not boring	___	___	___
Open to suggestions	___	___	___

Changes in teacher's style I would like to see:

_____

_____

_____

_____

_____

Changes in class content I would like to see:

_____

_____

_____

_____

_____

Changes in class mechanics I would like to see:

_____

_____

_____

Changes in skill development I would like to see:

_____

_____

_____

_____

_____

* I am interested in continuing with another EWP term. Yes / No
I am now interested in studying ESL at PCC or other educational institution